

AlphaPlus® 1-DODECENE

Version 5.3

Revision Date 2020-07-02

According to Regulation (EC) No. 1907/2006, Regulation (EC) No. 2015/830

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1

Product information

Product Name	:	AlphaPlus® 1-DODECENE		
Material	:	1087853, 1037008, 1015429, 1021778		

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
1-Dodecene	112-41-4 203-968-4	Chevron Phillips Chemical Company LP 01-2119475509-26-0003

1.2

Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Uses	: Manufacture
Supported	Use as an intermediate
	Formulation
	Use in coatings – industrial
	Use in coatings – professional
	Use in Coatings - Consumer
	Use as a cleaning agent – industrial
	Use as a cleaning agent – professional
	Use as a cleaning agent – consumer
	Use in Oil and Gas field drilling and production operations - Industrial
	Use in Oil and Gas field drilling and production operations –
	Professional
	Lubricants - Industrial
	Lubricants - Professional
	Lubricants - Consumer
	Functional Fluids - Industrial
	Functional Fluids - Professional
	Use in polymer production – industrial
1.3	
Details of the supplier of the	e safety data sheet
Company	: Chevron Phillips Chemical Company LP
SDS Number:100000068203	1/155

Δlı	ohaPlus® 1-DODEC	FN	F		SAFETY DATA SHEET
					Revision Date 2020-07-02
			Normal Alpha O 10001 Six Pines The Woodlands	Drive	
	Local	:		Chemicals Internationa tockholm Building) ncilaan 19	al N.V.
				nation: (832) 813-4862 rty: Product Safety Grou	ıp
.4	Emergency telephone:				
	866.442.9628 (North Ame 1.832.813.4984 (Internati Transport : CHEMTREC 800.424.930 Asia: CHEMWATCH (+61 EUROPE: BIG +32.14.58 Mexico CHEMTREC 01-8 South America SOS-Cote Argentina: +(54)-1159839 Responsible Department E-mail address Website	ona 00 o 2 9 454 800- ec Ir	l) r 703.527.3887(ir 186 1132) China: 5 (phone) or +32. 681-9531 (24 hou Iside Brazil: 0800	0532 8388 9090 14583516 (telefax) irs) 111.767 Outside Brazil: and Toxicology Group .com	: + 55.19.3467.1600
SEC	CTION 2: Hazards identificat	ion			
2.1	Classification of the substa REGULATION (EC) No 127 Aspiration hazard, Category	2/20	108 H30	4: be fatal if swallowed ar	nd enters airways.
.2			1- 4070/0000)		
	Labeling (REGULATION (E Hazard pictograms	:			
	Signal Word	:	Danger		
	Hazard Statements	:	H304	May be fatal if swalld airways.	owed and enters
	Precautionary Statements	:	Response:	·	
	-		P301 + P310	IF SWALLOWED: In	nmediately call a

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	P331 Storage:	POISON CENTER/ o Do NOT induce vom	
	P405	Store locked up.	
	Disposal: P501	Dispose of contents/ approved waste disp	
Hazardous ingredients whi 12-41-4 1-	ich must be listed or -Dodecene	n the label:	
Additional Labeling:			
EUH066 Repeated exposu The following percentage of 5 %		dryness or cracking. sts of ingredient(s) with unkr	nown acute toxicity:
SECTION 3: Composition/info	ormation on ingred	lients	
3.1 - 3.2			
Substance or Mixture			
Synonyms	: NAO 12 Dodecene-1 C12H24	(C12)	
Molecular formula	: C12H24		
Molecular formula Hazardous ingredients	: C12H24		
	: C12H24 CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
Hazardous ingredients	CAS-No. EC-No.	(REGULATION (EC) No	
Hazardous ingredients Chemical name 1-Dodecene	CAS-No. EC-No. Index No. 112-41-4 203-968-4	(REGULATION (EC) No 1272/2008)	[wt%] 95 - 100
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentioned	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304	[wt%] 95 - 100
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St SECTION 4: First aid measure	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentione	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304	[wt%] 95 - 100
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St SECTION 4: First aid measure 4.1	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentioned es neasures : Move out of sheet to the	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304	[wt%] 95 - 100 n 16. material safety data rial may produce a
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St SECTION 4: First aid measure 4.1 Description of first-aid measure	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentioned es measures : Move out of sheet to the serious, pote : If unconsciou	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304 d in this Section, see Sectio dangerous area. Show this doctor in attendance. Mate	[wt%] 95 - 100 n 16. material safety data rial may produce a vallowed or vomited. n and seek medical
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St SECTION 4: First aid measure 4.1 General advice	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentioned es neasures : Move out of sheet to the serious, pote : If unconscio advice. If sy	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304 d in this Section, see Sectio dangerous area. Show this doctor in attendance. Mate entially fatal pneumonia if sv us, place in recovery positio	[wt%] 95 - 100 n 16. material safety data rial may produce a vallowed or vomited. n and seek medical ician.
Hazardous ingredients Chemical name 1-Dodecene For the full text of the H-St SECTION 4: First aid measure 4.1 General advice If inhaled	CAS-No. EC-No. Index No. 112-41-4 203-968-4 atements mentioned es es neasures : Move out of sheet to the serious, pote : If unconsciou advice. If sy : If on skin, rir : Flush eyes v lenses. Prof	(REGULATION (EC) No 1272/2008) Asp. Tox. 1; H304 d in this Section, see Sectio d in this Section, see Sectio doctor in attendance. Mate entially fatal pneumonia if sw us, place in recovery positio mptoms persist, call a phys	[wt%] 95 - 100 n 16. material safety data rial may produce a vallowed or vomited. n and seek medical ician. othes, remove clothes. Remove contact ye wide open while

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	If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
SEC	CTION 5: Firefighting measu	res	
	Flash point	:	77°C (171°F)
	Autoignition temperature	:	225°C (437°F)
5.1	Extinguishing media		
	Suitable extinguishing media	:	Carbon dioxide (CO2).
	Unsuitable extinguishing media	:	High volume water jet.
5.2	Special hazards arising fro Specific hazards during fire fighting		he substance or mixture Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.3	Advice for firefighters Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
	Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
	Fire and explosion protection	:	Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.
SEC	CTION 6: Accidental release	me	asures
6.1	Personal precautions, prote	ecti	ve equipment and emergency procedures
	Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation.
5.2	Environmental precautions	i	
	Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
6.3	Matheda an Invest 11.1		
	Methods and materials for Methods for cleaning up	cor :	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable,
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closed containers for disposal.

6.4

Reference to other sections

Reference to other sections : For personal protection see section 8. For disposal considerations see section 13.

For additional details, see the Exposure Scenario in the Annex portion

SECTION 7: Handling and storage

7.1

 Precautions for safe handlin Handling	g	
Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and

sources of ignition.

7.2

Conditions for safe storage, including any incompatibilities

Storage

Requirements for storage areas and containers	:	No smoking. Keep container tightly closed in a dry and well- ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
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SECTION 8: Exposure controls/personal protection

8.1

Control parameters Ingredients with workplace control parameters

SE

Beståndsdelar	Grundval	Värde	Kontrollparametrar	Anmärkning
1-Dodecene	SE AFS	NGV	350 mg/m3	
	SE AFS	KGV	500 mg/m3	V,
V Vägledande kort	tidsgränsvärde ska användas son	n ett rekommenderat	t högsta värde som inte bör överskr	idas
NO				
Komponenter	Grunnlag	Verdi	Kontrollparametrer	Nota
1-Dodecene	FOR-2011-12-06- 1358	GV	40 ppm, 275 mg/m3	
LT				
Komponentai	Šaltinis	Vertė	Kontrolės parametrai	Pastaba
1-Dodecene	LT OEL	IPRD	350 mg/m3	
	LT OEL	TPRD	500 mg/m3	
EE				
EE Komponendid, osad	Alused	Väärtus	Kontrolliparameetrid	Märkused
	Alused EE OEL	Väärtus Piirnorm	Kontrolliparameetrid 5 mg/m3	Märkused Aerosool
Komponendid, osad				
Komponendid, osad	EE OEL			

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	EE OEL	Piirnorm	350 mg/m3	Aur
	EE OEL	Lühiajalise kokkupuute piirnorm	500 mg/m3	Aur
PNEC	: Fresh w Value:	/ater 0,001 mg/l		
PNEC	: Sea wa Value:	ter 0,001 mg/l		
PNEC		/ater sediment 9,87 mg/kg		
PNEC	: Sea seo Value:	diment 9,87 mg/kg		
PNEC	: Soil Value:	1,97 mg/kg		

8.2

Exposure controls Engineering measures

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection	: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
Hand protection	The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Eye protection	: Eye wash bottle with pure water. Tightly fitting safety goggles.
Skin and body protection	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame-resistant clothing. Footwear protecting against chemicals.
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Hygiene m	easures	: When using do not eat or drink. When Wash hands before breaks and at the	
For additio	nal details, see the l	Exposure Scenario in the Annex portion	
SECTION 9: Ph	ysical and chemic	al properties	
9.1	n on bacio nhucio	al and chemical properties	
Appearan		ai and chemical properties	
		Liquid	
Form Physical st Color	ate	: Liquid : Liquid : Clear, colorless	
Safety dat	а		
Flash point	:	: 77°C (171°F)	
Lower expl	osion limit	: 0,6 %(V)	
Upper expl	osion limit	: 5,4 %(V)	
Oxidizing p	properties	: no	
Autoignitio	n temperature	: 225°C (437°F)	
Thermal de	ecomposition	: No data available	
Molecular f	ormula	: C12H24	
Molecular	weight	: 168,36 g/mol	
рН		: Not applicable	
Freezing p	oint	: -35°C (-31°F)	
Boiling poir	nt/boiling range	: 213°C (415°F)	
Vapor pres	sure	: 19,30 Pa at 25°C (77°F)	
		0,35 kPa at 65°C (149°F)	
Relative de	ensity	: 0,76 at 15,6 °C (60,1 °F)	
Density		: 0,76 g/m3 at 20°C (68°F)	
		762 kg/m3 at 15°C (59°F)	
		736 kg/m3 at 50°C (122°F)	
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Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n- octanol/water	: No data available
Viscosity, kinematic	: 0,68 cSt at 100°C (212°F)
Relative vapor density	: 5,81 (Air = 1.0)
Evaporation rate	: No data available
SECTION 10: Stability and reac	tivity
10.1	
Reactivity	: No decomposition if stored and applied as directed.
10.2	
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
10.3	
Possibility of hazardous re	actions
Hazardous reactions	: Further information: No decomposition if stored and applied as directed.
	Hazardous reactions: Vapors may form explosive mixture with air.
10.4 Conditions to avoid	: Heat, flames and sparks.
10.5 Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Thermal decomposition	: No data available
10.6	
Other data	: No decomposition if stored and applied as directed.
SECTION 11: Toxicological info	ormation
11.1 Information on toxicologic	al effects
Acute oral toxicity	
1-Dodecene	: LD50: > 10.000 mg/kg
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	Species: Rat Sex: male Method: Fixed Dose Method Information given is based on data obtained from similar substances.
Acute inhalation toxicity	
1-Dodecene	: Not classified due to data which are conclusive although insufficient for classification.
Skin irritation	
1-Dodecene	: No skin irritation
Eye irritation 1-Dodecene	: No eye irritation Information given is based on data obtained from similar substances.
Sensitization	
1-Dodecene	: Did not cause sensitization on laboratory animals.
Repeated dose toxicity	
1-Dodecene	 Species: Rat, Male and female Sex: Male and female Application Route: Oral diet Dose: 0, 100, 500, 1000 mg/kg Exposure time: 13 wk Number of exposures: daily NOEL: 1.000 mg/kg Method: OCED Guideline 408 Information given is based on data obtained from similar substances.
	Species: Rat, Male and female Sex: Male and female Application Route: Inhalation Dose: 0, 300, 1000, 3000 ppm Exposure time: 13 wk Number of exposures: 6 hrs/d, 5 d/wk NOEL: 3000 ppm Method: OECD Guideline 413 Information given is based on data obtained from similar substances.
Genotoxicity in vitro	
1-Dodecene	: Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
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	Test Type: Chromosome aberration test in vitro Method: OECD Guideline 473 Result: negative
Reproductive toxicity	
1-Dodecene	 Species: Rat Sex: male Application Route: Oral diet Dose: 0, 100, 500, or 1000 mg/kg Exposure time: 44 D Number of exposures: daily Method: OECD Guideline 421 NOAEL Parent: 1.000 mg/kg NOAEL F1: 1.000 mg/kg
	Species: Rat Sex: female Application Route: Oral diet Dose: 0, 100, 500, or 1000 mg/kg Exposure time: 41-55 D Number of exposures: daily Method: OECD Guideline 421 NOAEL Parent: 1.000 mg/kg NOAEL F1: 1.000 mg/kg
Aspiration toxicity	
1-Dodecene	: May be fatal if swallowed and enters airways.
CMR effects	
1-Dodecene	 Carcinogenicity: Not available Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Teratogenicity: Not available Reproductive toxicity: Animal testing did not show any effects on fertility.
AlphaPlus® 1-DODECENE Further information	: Solvents may degrease the skin.
CTION 12: Ecological informat	tion
1	
Toxicity	
Toxicity to fish	
1-Dodecene	: No toxicity at the limit of solubility.
Toxicity to daphnia and othe	er aquatic invertebrates
1-Dodecene	No toxicity at the limit of solubility.

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Toxicity to algae	
1-Dodecene	: No toxicity at the limit of solubility.
12.2	
Persistence and degradabi	lity
Biodegradability	
1-Dodecene	 74,1 - 80 % Testing period: 28 d Method: OECD Test Guideline 301 This material is expected to be readily biodegradable.
I2.3 Bioaccumulative potential	
Bioaccumulation	
1-Dodecene	: No data available
I2.4 Mobility in soil	
Mobility	
1-Dodecene	: No data available
I2.5 Results of PBT and vPvB a	ssessment
Results of PBT assessment 1-Dodecene	: Non-classified PBT substance, Non-classified vPvB substance
12.6 Other adverse effects Additional ecological information Ecotoxicology Assessment	: No data available
Short-term (acute) aquatic ha 1-Dodecene	zard : This material is not expected to be harmful to aquatic organisms.
SECTION 13: Disposal consider	ations
I3.1 Waste treatment methods The information in this SDS p	pertains only to the product as shipped.
Use material for its intended may meet the criteria of a ha other State and local regulation regulated components may b	purpose or recycle if possible. This material, if it must be discarded, zardous waste as defined by US EPA under RCRA (40 CFR 261) or ons. Measurement of certain physical properties and analysis for e necessary to make a correct determination. If this material is ste, federal law requires disposal at a licensed hazardous waste

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Product	: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container Send to a licensed waste management company.	Γ.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cuttin torch on, the empty drum.	g
For additional details, see the	Exposure Scenario in the Annex portion	
CTION 14: Transport informa	tion	
shipments in non-bulk pack Consult the appropriate dome Goods Regulations for addition	shown here are for bulk shipments only, and may not apply to kages (see regulatory definition). estic or international mode-specific and quantity-specific Dangerou onal shipping description requirements (e.g., technical name or nar on shown here, may not always agree with the bill of lading shippi	ıs mes
bill of lading. US DOT (UNITED STATES I	Flashpoints for the material may vary slightly between the SDS and DEPARTMENT OF TRANSPORTATION) NS, LIQUID, N.O.S., COMBUSTIBLE LIQUID, III	1 (1)
	AL MARITIME DANGEROUS GOODS) HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY.	
	R TRANSPORT ASSOCIATION) HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY.	
	NGEROUS GOODS BY ROAD (EUROPE)) HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY.	
DANGEROUS GOODS (EUF	HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR	
OF DANGEROUS GOODS E	HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR	
ansport in bulk according to A	Annex II of MARPOL 73/78 and the IBC Code	

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Other information

: 1-Dodecene, S.T. 2, Cat. Y

SECTION 15: Regulatory information

15.1

Safety, health and environmental regulations/legislation specific for the substance or mixture National legislation

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Water contaminating class	:	WGK 1 slightly water endangering
(Germany)		

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2

5

DSL

15.2

Chemical Safety Asse	ssm	ent		
Components	: (dodec-1-ene	A Chemical Safety Assessment has been carried out for this substance.	203-968-4
Major Accident Hazar Legislation	d	: 96/82/EC Directive 96	Update: 2003 /82/EC does not apply	

regulation 1907/2006/EC.

TSCA inventory

Notification status	

Europe	REA	CH

Switzerland CH INV United States of America (USA) TSCA Canada DSL

Australia AICS New Zealand NZIoC Japan ENCS Korea KECI

On the inventory, or in compliance with the inventory On the inventory, or in compliance with the inventory On the inventory, or in compliance with the inventory 2 A substance(s) in this product was not registered, 2 notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

This product is in full compliance according to REACH

On the inventory, or in compliance with the inventory

On or in compliance with the active portion of the

All components of this product are on the Canadian

Philippines PICCS	: On the inventory, or in compliance with the inventory
China IECSC	: On the inventory, or in compliance with the inventory
Taiwan TCSI	: On the inventory, or in compliance with the inventory

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SECTION 16: Other information

: Health Hazard: 0 Fire Hazard: 2 Reactivity Hazard: 0	
: PE0019	
	Fire Hazard: 2 Reactivity Hazard: 0

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

ACGIH	American Conference of	LD50	Lethal Dose 50%
	Government Industrial Hygienists		
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effe
		NFPA	
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agenc
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupation Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentra
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substar
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recov Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and	TSCA	Toxic Substance Control Act
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	New Chemical Substances		
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

Full text of H-Statements referred to under sections 2 and 3.

H304 May be fatal if swallowed and enters airways.

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Annex: Exposure Scenarios

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ES 1	Manufacture (M); Industrial uses (SU3).
ES 2	Use as an intermediate; Industrial uses (SU3).
ES 3	Formulation; Industrial uses (SU3).
ES 4	Use in coatings – industrial; Industrial uses (SU3).
ES 5	Use in coatings – professional; Professional uses (SU22).
ES 6	Use in Coatings - Consumer; Consumer uses (SU21).
ES 7	Use as a cleaning agent – industrial; Industrial uses (SU3).
ES 8	Use as a cleaning agent – professional; Professional uses (SU22).
ES 9	Use as a cleaning agent – consumer; Consumer uses (SU21).
ES 10	Use in Oil and Gas field drilling and production operations - Industrial; Industrial uses (SU3).
ES 11	Use in Oil and Gas field drilling and production operations – Professional; Professional uses (SU22).
ES 12	Lubricants - Industrial; Industrial uses (SU3).
ES 13	Lubricants - Professional; Professional uses (SU22).
ES 14	Lubricants - Consumer; Consumer uses (SU21).
ES 15	Functional Fluids - Industrial; Industrial uses (SU3).
ES 16	Functional Fluids - Professional; Professional uses (SU22).
ES 17	Use in polymer production – industrial; Industrial uses (SU3).

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ES 1: Mai	nufacture (M); Industrial uses (SU3).		
1.1. Title	section		
Exposure	Scenario name : Manufacture		
Structure	d Short Title : Manufacture (M); Industrial uses (SU3).		
Substanc	e : dodec-1-ene <u>EC-No.:</u> 203-968-4		
Environm	ent		
CS 1	Manufacture	ERC1, ERC4	
Worker			
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1	
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2	
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3	
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4	
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC8a	
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8b	
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC15	
1.2. Conditions of use affecting exposure 1.2.1. Control of environmental exposure: Manufacture of substances (ERC1) / Industrial use of processing aids in processes and products, not becoming part of articles (ERC4) Product (article) characteristics			
Covers percentage substance in the product up to 100 %.			
Amount u	sed (or contained in articles), frequency and duration of use/exposure		
Maximum (MSafe)	allowable site tonnage : 213.676 kg/day		
Release ty	•		
Emission of	days : 300		
Technical and organisational conditions and measures			
SDS Numb	per:10000068203 18/155		

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Risk from environmental exposure is Air - minimum efficiency of 90 % Water - minimum efficiency of 96,4 %		
Conditions and measures related t	o sewage treatment plant	
STP type	: Municipal sewage treatment plant	
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. 	
STP effluent	: 2.000 m3/d	
Conditions and measures related t	o treatment of waste (including article waste)	
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.	
Other conditions affecting environ	mental exposure	
Receiving surface water flow	: 18.000 m3/d	
Local freshwater dilution factor	: 40	
Local marine water dilution factor	: 100	
Product (article) characteristics	s with equivalent containment conditions (PROC1)	
Covers percentage substance in the	product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in artic	cles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational cond	litions and measures	
(tested to EN374) if hand contact with	t. Identify potential areas for indirect skin contact. Wear gloves in substance likely. Clean up contamination/spills as soon as they on immediately. Provide basic employee training to prevent / y skin problems that may develop.	
Other conditions affecting workers exposure		
Temperature	: Assumes use at not more than 20°C above ambient temperature.	

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	Chemical production or refinery in closed continuous process e or processes with equivalent containment conditions		
Product (article) characteristics			
Covers percentage substance in the p	product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in artic	les), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours		
Technical and organisational cond	itions and measures		
(tested to EN374) if hand contact with	. Identify potential areas for indirect skin contact. Wear gloves a substance likely. Clean up contamination/spills as soon as they on immediately. Provide basic employee training to prevent / / skin problems that may develop.		
Other conditions affecting workers	exposure		
Temperature	: Assumes use at not more than 20°C above ambient temperature.		
1.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)			
Product (article) characteristics			
Covers percentage substance in the p	product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in artic	les), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours		
Technical and organisational conditions and measures			
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.			
No other specific measures identified.			

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temperature.

1.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

1.2.6. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

1.2.7. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

1

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

1.2.8. Control of worker exposure: Use as laboratory reagent (PROC15)

:

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

1.3. Exposure estimation and reference to its source

:

1.3.1. Environmental release and exposure: Manufacture of substances (ERC1) / Industrial use of processing aids in processes and products, not becoming part of articles (ERC4)

Protection Target	Exposure estimate	RCR
Freshwater	0,280 μg/l (EUSES)	0,3
Sea water	0,105 μg/l (EUSES)	0,117
Freshwater sediment	0,669 mg/kg wet weight (EUSES)	0,312
Sea sediment	0,251 mg/kg wet weight (EUSES)	0,117
Soil	0,0048 mg/kg wet weight (EUSES)	0,003
Air	0,00185 mg/m³	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

1.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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1.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.3.8. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 2: Use as an intermediate; Industrial uses (SU3).			
2.1. Title section			
Exposure Scenario name : Use as an intermediate			
Structured Short Title : Use as an intermediate; Industrial uses (SU3)			
Substance : dodec-1-ene <u>EC-No.:</u> 203-968-4			
Environment			
CS 1 Use as an intermediate	ERC6a		
Worker			
CS 2 General measures applicable to all activities, General measures (skin irritants)	PROC1		
CS 3 General measures applicable to all activities, General measures (skin irritants)	PROC2		
CS 4 General measures applicable to all activities, General measures (skin irritants)	PROC3		
CS 5 General measures applicable to all activities, General measures (skin irritants)	PROC4		
CS 6 General measures applicable to all activities, General measures (skin irritants)	PROC8a		
CS 7 General measures applicable to all activities, General measures (skin irritants)	PROC8b		
CS 8 General measures applicable to all activities, General measures (skin irritants)	PROC15		
2.2. Conditions of use affecting exposure 2.2.1. Control of environmental exposure: Use of intermediate (ERC6a) Product (article) characteristics			
Covers percentage substance in the product up to 100 %.			
Amount used (or contained in articles), frequency and duration of use/exposure			
Maximum allowable site tonnage : 43.975 kg/day (MSafe)			
Release type : Continuous release			
Emission days : 300			
Technical and organisational conditions and measures			
Risk from environmental exposure is driven by soil.			
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Air - minimum efficiency of 80 %	
Water - minimum efficiency of 96,4 %	6

Conditions and measures related to sewage treatment plant		
STP type	: Municipal sewage treatment plant	
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. 	
STP effluent	: 2.000 m3/d	

Conditions and measures related to treatment of waste (including article waste)

Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.	
Other conditions affecting environmental exposure		

Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor		100

2.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

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	2.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)			
Product (article) characteristics				
Covers percentage substance in the	e product up to 100 %.			
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure			
Amount used (or contained in art	icles), frequency and duration of use/exposure			
Duration	: Covers daily exposures up to 8 hours			
Technical and organisational con	ditions and measures			
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.				
Other conditions affecting worker	rs exposure			
Temperature	: Assumes use at not more than 20°C above ambient temperature.			
2.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)				
Product (article) characteristics				
Covers percentage substance in the	e product up to 100 %.			
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure			
Amount used (or contained in art	icles), frequency and duration of use/exposure			
Duration	: Covers daily exposures up to 8 hours			
Technical and organisational conditions and measures				
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.				
Other conditions affecting workers exposure				
Temperature	: Assumes use at not more than 20°C above ambient			
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temperature.

2.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

2.2.6. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics		
Covers percentage substance	in the product up to 100 %.	
Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures		
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves		

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

2.2.7. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

1

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

2.2.8. Control of worker exposure: Use as laboratory reagent (PROC15)

:

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

2.3. Exposure estimation and reference to its source

2.3.1. Environmental release and exposure: Use of intermediate (ERC6a)

:

Protection Target	Exposure estimate	RCR
Freshwater	0,538 μg/l (EUSES)	0,597
Sea water	0,0536 μg/I (EUSES)	0,060
Freshwater sediment	1,29 mg/kg wet weight (EUSES)	0,599
Sea sediment	0,128 mg/kg wet weight (EUSES)	0,060
Soil	1,32 mg/kg wet weight (EUSES)	0,758
Air	0,185 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

2.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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2.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.3.8. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

2.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 3: Fo	rmulation; Industrial uses (SU3).		
3.1. Title	section		
Exposure	Scenario name : Formulation		
Structure	ed Short Title : Formulation; Industrial uses (SU3).		
Substand	Substance : dodec-1-ene <u>EC-No.:</u> 203-968-4 203-968-4		
Environn	nent		
CS 1	Formulation	ERC2	
Worker			
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1	
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2	
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3	
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4	
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC5	
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8a	
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC8b	
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC9	
CS 10	General measures applicable to all activities, General measures (skin irritants)	PROC14	
CS 11	General measures applicable to all activities, General measures (skin irritants)	PROC15	
3.2. Conditions of use affecting exposure 3.2.1. Control of environmental exposure: Formulation into mixture (ERC2)			
Product	article) characteristics		
Covers percentage substance in the product up to 100 %.			
Amount used (or contained in articles), frequency and duration of use/exposure			
Maximum	allowable site tonnage : 74.906 kg/day		
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(MSafe)	
Release type	: Continuous release
Emission days	: 300
Technical and organisational condit	ions and measures
Risk from environmental exposure is d Air - minimum efficiency of 0 % Water - minimum efficiency of 96,4 %	riven by soil.
Conditions and measures related to	sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related to	treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environm	nental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	hemical production or refinery in closed process without with equivalent containment conditions (PROC1)
Product (article) characteristics	
Covers percentage substance in the p	roduct up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

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Other conditions affecting workers exposure		
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
3.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)		
Product (article) characteristi	ics	
Covers percentage substance i	n the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in	n articles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational	conditions and measures	
Avoid direct skin contact with pl (tested to EN374) if hand conta occur. Wash off any skin conta	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves act with substance likely. Clean up contamination/spills as soon as they mination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.	
Other conditions affecting wo	orkers exposure	
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
3.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)		
Product (article) characteristi	ics	
Covers percentage substance i	n the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational	conditions and measures	
Avoid direct skin contact with pr (tested to EN374) if hand conta	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves act with substance likely. Clean up contamination/spills as soon as they mination immediately. Provide basic employee training to prevent /	
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minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

3.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

3.2.6. Control of worker exposure: Mixing or blending in batch processes (PROC5)

Product (article) characteristics			
Covers percentage substance in the product up to 100 %.			
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in articles), frequency and duration of use/exposure			
Duration	: Covers daily exposures up to 8 hours		
Technical and organisation	al conditions and measures		
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent /			
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minimise exposures and to report any s No other specific measures identified.	kin problems that may develop.
Other conditions affecting workers e	xposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
3.2.7. Control of worker exposure: Tra dedicated-facilities (PROC8a)	ansfer of substance or mixture (charging/discharging) at non
Product (article) characteristics	
Covers percentage substance in the pro	oduct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Technical and organisational condition	ons and measures
(tested to EN374) if hand contact with s	dentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting workers e	xposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
3.2.8. Control of worker exposure: Tra dedicated facilities (PROC8b)	ansfer of substance or mixture (charging/discharging) at
Product (article) characteristics	
Covers percentage substance in the pro	oduct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Technical and organisational condition	ons and measures
	nmediate medical assistance. dentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they
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	ination immediately. Provide basic employ t any skin problems that may develop. ified.	yee training to prevent /
Other conditions affecting wor	kers exposure	
Temperature	: Assumes use at not more than 2 temperature.	0°C above ambient
3.2.9. Control of worker exposu (dedicated filling line, including	re: Transfer of substance or mixture ir J weighing) (PROC9)	nto small containers
Product (article) characteristic	S	
Covers percentage substance in	the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kF and Pressure	a at Standard Temperature
Amount used (or contained in	articles), frequency and duration of us	e/exposure
Duration	: Covers daily exposures up to 8 h	nours
Technical and organisational c	onditions and measures	
Avoid direct skin contact with pro (tested to EN374) if hand contact occur. Wash off any skin contam	seek immediate medical assistance. duct. Identify potential areas for indirect s t with substance likely. Clean up contamir ination immediately. Provide basic employ t any skin problems that may develop. ified.	nation/spills as soon as they
Other conditions affecting wor	kers exposure	
Temperature	: Assumes use at not more than 2 temperature.	0°C above ambient
3.2.10. Control of worker expos (PROC14)	ure: Tabletting, compression, extrusio	n, pelettisation, granulation
Product (article) characteristic	S	
Covers percentage substance in	the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kF and Pressure	a at Standard Temperature
Amount used (or contained in	articles), frequency and duration of us	e/exposure
Duration	: Covers daily exposures up to 8 h	nours
Technical and organisational c	onditions and measures	
	seek immediate medical assistance. duct. Identify potential areas for indirect s	skin contact. Wear gloves
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(tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

3.2.11. Control of worker exposure: Use as laboratory reagent (PROC15)

:

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

•

: Assumes use at not more than 20°C above ambient temperature.

3.3. Exposure estimation and reference to its source

3.3.1. Environmental release and exposure: Formulation into mixture (ERC2)

Protection Target	Exposure estimate	RCR
Freshwater	0,177 μg/l (EUSES)	0,196
Sea water	0,0175 μg/l (EUSES)	0,019
Freshwater sediment	0,422 mg/kg wet weight (EUSES)	0,197
Sea sediment	0,0418 mg/kg wet weight (EUSES)	0,020
Soil	0,465 mg/kg wet weight (EUSES)	0,267
Air	0,0278 mg/m ³	
/	0,0270 mg/m	

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Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

3.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.6. Worker exposure: Mixing or blending in batch processes (PROC5)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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3.3.9. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.10. Worker exposure: Tabletting, compression, extrusion, pelettisation, granulation (PROC14)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.3.11. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

3.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 4: Us	e in coatings – industrial; Industrial uses (SU3).	
4.1. Title		
•	e Scenario name : Use in coatings – industrial	
	ed Short Title : Use in coatings – industrial; Industrial uses ((SU3).
Substan	ce : dodec-1-ene <u>EC-No.: 2</u> 03-968-4	
Environr	nent	
CS 1	Use in coatings – industrial	ERC4
Worker		
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC5
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC7
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC8b
CS 10	General measures applicable to all activities, General measures (skin irritants)	PROC9
CS 11	General measures applicable to all activities, General measures (skin irritants)	PROC10
CS 12	General measures applicable to all activities, General measures (skin irritants)	PROC13
CS 13	General measures applicable to all activities, General measures (skin irritants)	PROC14
CS 14	General measures applicable to all activities, General measures (skin irritants)	PROC15

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

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Product (article) characteristics	
Covers percentage substance in th	e product up to 100 %.
Amount used (or contained in ar	ticles), frequency and duration of use/exposure
Maximum allowable site tonnage (MSafe)	: 11.905 kg/day
Release type	: Continuous release
Emission days	: 300
Technical and organisational co	nditions and measures
Risk from environmental exposure Air - minimum efficiency of 90 % Water - minimum efficiency of 96,4	
Conditions and measures related	d to sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related	d to treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting enviro	onmental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	e: Chemical production or refinery in closed process without ses with equivalent containment conditions (PROC1)
Covers percentage substance in th	e product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in ar	ticles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational co	
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Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

4.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

÷.

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

 Temperature
 : Assumes use at not more than 20°C above ambient temperature.

4.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Product (article) characteristics	
Covers percentage substance in t	he product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in a	rticles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

4.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.6. Control of worker exposure: Mixing or blending in batch processes (PROC5)

 Product (article) characteristics

 Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

 Amount used (or contained in articles), frequency and duration of use/exposure

 Duration
 : Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.7. Control of worker exposure: Industrial spraying (PROC7)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.8. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

4.2.9. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.10. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.11. Control of worker exposure: Roller application or brushing (PROC10)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.12. Control of worker exposure: Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics	
Covers percentage substance in the	e product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in art	icles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.13. Control of worker exposure: Tabletting, compression, extrusion, pelettisation, granulation (PROC14)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.2.14. Control of worker exposure: Use as laboratory reagent (PROC15)

Product (article) characteristic	S
Covers percentage substance in	the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

4.3. Exposure estimation and reference to its source

4.3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Protection Target	Exposure estimate	RCR
Freshwater	0,0388 µg/l (EUSES)	0,043
Sea water	0,0369 μg/l (EUSES)	0,004
Freshwater sediment	0,0928 mg/kg wet weight (EUSES)	0,043
Sea sediment	0,0088 mg/kg wet weight (EUSES)	0,004
Soil	0,0804 mg/kg wet weight (EUSES)	0,046
Air	0,0149 mg/m ³	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

4.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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Version 5.3 4.3.4. Worker exposure: Manufacture or formu

4.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.6. Worker exposure: Mixing or blending in batch processes (PROC5)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.7. Worker exposure: Industrial spraying (PROC7)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.9. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.10. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.11. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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4.3.12. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.13. Worker exposure: Tabletting, compression, extrusion, pelettisation, granulation (PROC14)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.3.14. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

4.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 5: Us	e in coatings – professional; Professional uses (SU22).	
5.1. Title	section	
Exposur	Scenario name : Use in coatings – professional	
Structure	ed Short Title : Use in coatings – professional; Professional	uses (SU22).
Substan	ce : dodec-1-ene <u>EC-No.:</u> 203-968-4	
Environr	nent	
CS 1	Use in coatings – professional	ERC8a, ERC8d
Worker		
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC5
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC8b
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC10
CS 10	General measures applicable to all activities, General measures (skin irritants)	PROC11
CS 11	General measures applicable to all activities, General measures (skin irritants)	PROC13
CS 12	General measures applicable to all activities, General measures (skin irritants)	PROC15
CS 13	General measures applicable to all activities, General measures (skin irritants)	PROC19

5.2. Conditions of use affecting exposure

5.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

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Product (article) characteristics	
Covers percentage substance in th	ne product up to 100 %.
Amount used (or contained in an	rticles), frequency and duration of use/exposure
Maximum allowable site tonnage (MSafe)	: 25 kg/day
Release type	: Wide dispersive use
Emission days	: 300
Technical and organisational co	nditions and measures
Risk from environmental exposure Air - minimum efficiency of 0 % Water - minimum efficiency of 96,4	
Conditions and measures relate	d to sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures relate	d to treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting enviro	onmental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	e: Chemical production or refinery in closed process without ses with equivalent containment conditions (PROC1)
Covers percentage substance in th	ne product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in an	rticles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational co	nditions and measures
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Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

5.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

 Temperature
 : Assumes use at not more than 20°C above ambient temperature.

5.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

 Product (article) characteristics

 Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

 Amount used (or contained in articles), frequency and duration of use/exposure

 Duration
 : Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

5.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.6. Control of worker exposure: Mixing or blending in batch processes (PROC5)

Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature
	and Pressure
Amount used (or contained in	and Pressure a articles), frequency and duration of use/exposure

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

5.2.7. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.8. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.9. Control of worker exposure: Roller application or brushing (PROC10)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.10. Control of worker exposure: Non-industrial spraying (PROC11)

Product (article) characteristics	
Covers percentage substance in the pro-	duct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articles	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
SDS Number:100000068203	57/155
Physical form of product : Amount used (or contained in articles Duration :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure and Pressure c), frequency and duration of use/exposure Covers daily exposures up to 8 hours

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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.11. Control of worker exposure: Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.12. Control of worker exposure: Use as laboratory reagent (PROC15)

Product (article) characteristics	
Covers percentage substance in the proc	duct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articles), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
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Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.2.13. Control of worker exposure: Manual activities involving hand contact (PROC19)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

5.3. Exposure estimation and reference to its source

5.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Protection Target	Exposure estimate	RCR
Freshwater	0,0388 µg/I (EUSES)	0,043
Sea water	0,0037 μg/l (EUSES)	0,004
Freshwater sediment	0,0928 mg/kg wet weight	0,043
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	(EUSES)	
Sea sediment	0,0088 mg/kg wet weight (EUSES)	0,004
Soil	0,0441 mg/kg wet weight (EUSES)	0,025
Air	0,298 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

5.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.6. Worker exposure: Mixing or blending in batch processes (PROC5)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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5.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.9. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.10. Worker exposure: Non-industrial spraying (PROC11)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.11. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.12. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.3.13. Worker exposure: Manual activities involving hand contact (PROC19)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

5.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Version 5.3 ES 6: Use ir 6.1. Title se	IS® 1-DODECENE Revisi n Coatings - Consumer; Consumer uses (SU21).	ion Date 2020-07-02
ES 6: Use ir 6.1. Title se		
6.1. Title se		
	ation	
Exposuro Se		
-	cenario name : Use in Coatings - Consumer	
Structured S	5	es (SU21).
Substance	: dodec-1-ene <u>EC-No.:</u> 203-968-4	
Environmen	nt	
CS 1 Us	se in Coatings - Consumer	ERC8a, ERC8d
Consumer		
	eneral measures applicable to all activities, General measures (skir ritants)	n PC1
	eneral measures applicable to all activities, General measures (skir ritants)	n PC4
	eneral measures applicable to all activities, General measures (skir ritants)	n PC8
	eneral measures applicable to all activities, General measures (skir ritants)	n PC9a
	eneral measures applicable to all activities, General measures (skir ritants)	n PC9b
	eneral measures applicable to all activities, General measures (skir ritants)	n PC9c
	eneral measures applicable to all activities, General measures (skir ritants)	PC15
	eneral measures applicable to all activities, General measures (skir ritants)	n PC18
	eneral measures applicable to all activities, General measures (skir ritants)	n PC23
	eneral measures applicable to all activities, General measures (skir ritants)	n PC24
	eneral measures applicable to all activities, General measures (skir ritants)	n PC31
	eneral measures applicable to all activities, General measures (skir ritants)	n PC34

6.2. Conditions of use affecting exposure

6.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

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Product (article) characteristics Covers percentage substance in the product up to 100 %. Amount used (or contained in articles), frequency and duration of use/exposure Maximum allowable site tonnage : 23 kg/day (MSafe) Release type Wide dispersive use 2 Emission days : 365 Conditions and measures related to treatment of waste (including article waste) Waste treatment : External treatment and disposal of waste should comply with applicable local and/or national regulations. Other conditions affecting environmental exposure Receiving surface water flow : 18.000 m3/d : 10 Local freshwater dilution factor Local marine water dilution factor : 100 6.2.2. Control of consumer exposure: Adhesives, sealants (PC1) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration Covers daily exposures up to 8 hours : Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Assumes use at not more than 20°C above ambient Temperature : temperature. 6.2.3. Control of consumer exposure: Anti-Freeze and de-icing products (PC4) Product (article) characteristics SDS Number:100000068203 63/155

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Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

Duration

Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

6.2.4. Control of consumer exposure: Biocidal products (PC8)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

6.2.5. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

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Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Conditions and measures related to	personal protection, hygiene and health evaluation
(tested to EN374) if hand contact with su	lentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting consumer	s exposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
6.2.6. Control of consumer exposure:	Fillers, putties, plasters, modelling clay (PC9b)
Product (article) characteristics	
Covers percentage substance in the pro	oduct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Conditions and measures related to	personal protection, hygiene and health evaluation
(tested to EN374) if hand contact with su	lentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting consumer	s exposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
6.2.7. Control of consumer exposure:	Finger paints (PC9c)
Product (article) characteristics	
Covers percentage substance in the pro	oduct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
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Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Assumes use at not more than 20°C above ambient temperature.

6.2.8. Control of consumer exposure: Non-metal surface treatment products (PC15)

:

and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration : Covers daily exposures up to 8 hours Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 62.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure		
Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration : Covers daily exposures up to 8 hours Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove Kested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as isoccur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure	roduct (article) characteristi	ics
and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration : Covers daily exposures up to 8 hours Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure	Covers percentage substance in	in the product up to 100 %.
Duration : Covers daily exposures up to 8 hours Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as to occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure	hysical form of product	
Conditions and measures related to personal protection, hygiene and health evaluation Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as boccur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. S.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	mount used (or contained in	n articles), frequency and duration of use/exposure
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as incorr. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	Duration	: Covers daily exposures up to 8 hours
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear glove (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as a concur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting consumers exposure Temperature : Assumes use at not more than 20°C above ambient temperature. 5.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	conditions and measures rela	ated to personal protection, hygiene and health evaluation
Temperature : Assumes use at not more than 20°C above ambient temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	void direct skin contact with pro ested to EN374) if hand contac ccur. Wash off any skin contan inimise exposures and to repo	oduct. Identify potential areas for indirect skin contact. Wear gloves ct with substance likely. Clean up contamination/spills as soon as they nination immediately. Provide basic employee training to prevent / ort any skin problems that may develop.
temperature. 6.2.9. Control of consumer exposure: Ink and toners (PC18) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	Other conditions affecting co	onsumers exposure
Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	emperature	
Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure Amount used (or contained in articles), frequency and duration of use/exposure	2.9. Control of consumer ex	posure: Ink and toners (PC18)
Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Tempera and Pressure	Product (article) characteristi	ics
Amount used (or contained in articles), frequency and duration of use/exposure	Covers percentage substance in	in the product up to 100 %.
	hysical form of product	
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Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

6.2.10. Control of consumer exposure: Leather treatment products (PC23)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
--------------------------	---

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

6.2.11. Control of consumer exposure: Lubricants, greases, release products (PC24)

Product (article) characteristics	
Covers percentage substance in t	he product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in a	rticles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
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Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

6.2.12. Control of consumer exposure: Polishes and wax blends (PC31)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

 Temperature
 : Assumes use at not more than 20°C above ambient temperature.

6.2.13. Control of consumer exposure: Textile dyes and impregnating products (PC34)

Product (article) characteristic	S	
Covers percentage substance in	the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Conditions and measures related to personal protection, hygiene and health evaluation		
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Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

6.3. Exposure estimation and reference to its source

:

6.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Protection Target	Exposure estimate	RCR
Freshwater	0,0358 μg/l (EUSES)	0,040
Sea water	0,0034 µg/l (EUSES)	0,004
Freshwater sediment	0,0856 mg/kg wet weight (EUSES)	0,040
Sea sediment	0,0081 mg/kg wet weight (EUSES)	0,004
Soil	0,0364 mg/kg wet weight (EUSES)	0,021
Air	0,246 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

6.3.2. Consumer exposure: Adhesives, sealants (PC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.3. Consumer exposure: Anti-Freeze and de-icing products (PC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.4. Consumer exposure: Biocidal products (PC8)

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Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.5. Consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.6. Consumer exposure: Fillers, putties, plasters, modelling clay (PC9b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.7. Consumer exposure: Finger paints (PC9c)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.8. Consumer exposure: Non-metal surface treatment products (PC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.9. Consumer exposure: Ink and toners (PC18)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.10. Consumer exposure: Leather treatment products (PC23)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.11. Consumer exposure: Lubricants, greases, release products (PC24)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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6.3.12. Consumer exposure: Polishes and wax blends (PC31)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.3.13. Consumer exposure: Textile dyes and impregnating products (PC34)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

6.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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AlnhaF	SAFE ⁻ Plus® 1-DODECENE	TY DATA SHEET		
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ES 7: Use as a cleaning agent – industrial; Industrial uses (SU3).				
7.1. Title	section			
Exposure Scenario name : Use as a cleaning agent – industrial				
Structured Short Title : Use as a cleaning agent – industrial; Industrial uses (SU3).				
Substand	ce : dodec-1-ene <u>EC-No.:</u> 203-968-4			
Environn	nent			
CS 1	Use as a cleaning agent – industrial	ERC4		
Worker				
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC2		
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC3		
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC4		
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC7		
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC8a		
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8b		
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC10		
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC13		
7.2. Conditions of use affecting exposure 7.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)				
Product (article) characteristics				
Covers percentage substance in the product up to 100 %.				
Amount used (or contained in articles), frequency and duration of use/exposure				
Maximum allowable site tonnage : 8.410 kg/day (MSafe)				
Release t				
Emission	days : 300			
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Fechnical and organisational conditions and measures	
Risk from environmental exposure is Air - minimum efficiency of 70 % Water - minimum efficiency of 96,4 °	
Conditions and measures related	to sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related	to treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environ	nmental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
	: 100 Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions
7.2.2. Control of worker exposure: with occasional controlled exposu	Chemical production or refinery in closed continuous process
7.2.2. Control of worker exposure: with occasional controlled exposu (PROC2)	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions
7.2.2. Control of worker exposure: with occasional controlled exposu (PROC2) Product (article) characteristics	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions
7.2.2. Control of worker exposure: with occasional controlled exposu (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions
7.2.2. Control of worker exposure: with occasional controlled exposu (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions e product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
7.2.2. Control of worker exposure: with occasional controlled exposu (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in arti	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions a product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure icles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours
 7.2.2. Control of worker exposure: with occasional controlled exposure (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in artized in the Duration Technical and organisational con Do not ingest. If swallowed then see Avoid direct skin contact with product (tested to EN374) if hand contact with 	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions e product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure icles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours ditions and measures ek immediate medical assistance. ct. Identify potential areas for indirect skin contact. Wear gloves th substance likely. Clean up contamination/spills as soon as they tion immediately. Provide basic employee training to prevent / my skin problems that may develop.
 7.2.2. Control of worker exposure: with occasional controlled exposure (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in artized and organisational con Duration Do not ingest. If swallowed then see Avoid direct skin contact with product (tested to EN374) if hand contact with occur. Wash off any skin contamination minimise exposures and to report articed to report artice	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions e product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure icles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours ditions and measures ek immediate medical assistance. ct. Identify potential areas for indirect skin contact. Wear gloves th substance likely. Clean up contamination/spills as soon as they tion immediately. Provide basic employee training to prevent / ny skin problems that may develop. d.
 7.2.2. Control of worker exposure: with occasional controlled exposure (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in article) Duration Technical and organisational con Do not ingest. If swallowed then see Avoid direct skin contact with product (tested to EN374) if hand contact with occur. Wash off any skin contaminaria minimise exposures and to report ar No other specific measures identifie 	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions e product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure icles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours ditions and measures ek immediate medical assistance. ct. Identify potential areas for indirect skin contact. Wear gloves th substance likely. Clean up contamination/spills as soon as they tion immediately. Provide basic employee training to prevent / ny skin problems that may develop. d.
 7.2.2. Control of worker exposure: with occasional controlled exposure (PROC2) Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in artized (or contained in artized	Chemical production or refinery in closed continuous process are or processes with equivalent containment conditions a product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure icles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours ditions and measures ek immediate medical assistance. ct. Identify potential areas for indirect skin contact. Wear gloves th substance likely. Clean up contamination/spills as soon as they tion immediately. Provide basic employee training to prevent / ny skin problems that may develop. d. : Assumes use at not more than 20°C above ambient

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Product (article) character	istics
	ce in the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained	d in articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisation	nal conditions and measures
Avoid direct skin contact with (tested to EN374) if hand con occur. Wash off any skin cor	hen seek immediate medical assistance. In product. Identify potential areas for indirect skin contact. Wear gloves Intact with substance likely. Clean up contamination/spills as soon as they Intamination immediately. Provide basic employee training to prevent / eport any skin problems that may develop. Identified.
Other conditions affecting	workers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
7.2.4. Control of worker exp	
7.2.4. Control of worker exp	temperature.
7.2.4. Control of worker exp (PROC4) Product (article) characteri	temperature.
7.2.4. Control of worker exp (PROC4) Product (article) characteri	temperature.
7.2.4. Control of worker exp (PROC4) Product (article) characteri Covers percentage substance Physical form of product	temperature. bosure: Chemical production where opportunity for exposure arises istics ce in the product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient

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7.2.5. Control of worker exposure: Industrial spraying (PROC7)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

7.2.6. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characterist	ics	
Covers percentage substance	in the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures		
Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.		
Other conditions affecting workers exposure		
Temperature	: Assumes use at not more than 20°C above ambient	
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temperature.

7.2.7. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

7.2.8. Control of worker exposure: Roller application or brushing (PROC10)

Product (article) characteri	stics	
Covers percentage substanc	e in the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisatior	nal conditions and measures	
Avoid direct skin contact with (tested to EN374) if hand cor occur. Wash off any skin con	nen seek immediate medical assistance. n product. Identify potential areas for indirect skin contact. Wear gloves ntact with substance likely. Clean up contamination/spills as soon as they tamination immediately. Provide basic employee training to prevent / eport any skin problems that may develop. dentified.	
Other conditions affecting	workers exposure	

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temperature.

7.2.9. Control of worker exposure: Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

7.3. Exposure estimation and reference to its source

7.3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Protection Target	Exposure estimate	RCR
Freshwater	0,022 μg/l (EUSES)	0,024
Sea water	0,002 μg/l (EUSES)	0,002
Freshwater sediment	0,0525 mg/kg wet weight (EUSES)	0,025
Sea sediment	0,0048 mg/kg wet weight (EUSES)	0,002
Soil	0,114 mg/kg wet weight (EUSES)	0,065
Air	0,0046 mg/m³	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

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7.3.2. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.3. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.4. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.5. Worker exposure: Industrial spraying (PROC7)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.8. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

7.3.9. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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7.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 8: Use as a cleaning agent – professional; Professional uses (SU22). 8.1. Title section **Exposure Scenario name** Use as a cleaning agent - professional : **Structured Short Title** Use as a cleaning agent – professional; Professional uses : (SU22). dodec-1-ene Substance • EC-No .: 203-968-4 Environment CS 1 Use as a cleaning agent – professional ERC8a. ERC8d Worker CS₂ General measures applicable to all activities, General measures (skin PROC2 irritants) CS 3 General measures applicable to all activities, General measures (skin PROC3 irritants) General measures applicable to all activities, General measures (skin CS₄ PROC4 irritants) CS 5 General measures applicable to all activities, General measures (skin PROC8a irritants) CS 6 General measures applicable to all activities, General measures (skin PROC8b irritants) CS 7 General measures applicable to all activities, General measures (skin PROC10 irritants) PROC11 CS 8 General measures applicable to all activities, General measures (skin irritants) CS 9 General measures applicable to all activities, General measures (skin PROC13 irritants) 8.2. Conditions of use affecting exposure 8.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Amount used (or contained in articles), frequency and duration of use/exposure

Maximum allowable site tonnage : 45 kg/day (MSafe)

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Release type	: Wide dispersive use
Emission days	: 300
Technical and organisational condi	tions and measures
Risk from environmental exposure is of Air - minimum efficiency of 0 % Water - minimum efficiency of 96,4 %	Iriven by freshwater sediment.
Conditions and measures related to	sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related to	treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environr	nental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	hemical production or refinery in closed continuous process or processes with equivalent containment conditions
Product (article) characteristics	
Covers percentage substance in the p	roduct up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articl	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condi	tions and measures
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting workers	exposure
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Temperature

Assumes use at not more than 20°C above ambient temperature.

8.2.3. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

8.2.4. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

5

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

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Other conditions affecting wor	kers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
8.2.5. Control of worker exposu dedicated-facilities (PROC8a)	re: Transfer of substance or mixture (charging/discharging) at non
Product (article) characteristic	S
Covers percentage substance in	the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational o	conditions and measures
Avoid direct skin contact with pro (tested to EN374) if hand contact occur. Wash off any skin contam	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves t with substance likely. Clean up contamination/spills as soon as they ination immediately. Provide basic employee training to prevent / t any skin problems that may develop. ified.
Other conditions affecting wor	kers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
8.2.6. Control of worker exposu dedicated facilities (PROC8b)	re: Transfer of substance or mixture (charging/discharging) at
Product (article) characteristic	s
Covers percentage substance in	the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational o	conditions and measures
Avoid direct skin contact with pro (tested to EN374) if hand contact occur. Wash off any skin contam	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves t with substance likely. Clean up contamination/spills as soon as they ination immediately. Provide basic employee training to prevent / t any skin problems that may develop. ified.
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Other conditions affecting workers exposure		
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
8.2.7. Control of worker exposu	ure: Roller application or brushing (PROC10)	
Product (article) characteristic	;S	
Covers percentage substance in	the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in	articles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational of	conditions and measures	
Avoid direct skin contact with pro (tested to EN374) if hand contact occur. Wash off any skin contam	seek immediate medical assistance. oduct. Identify potential areas for indirect skin contact. Wear gloves at with substance likely. Clean up contamination/spills as soon as they nination immediately. Provide basic employee training to prevent / rt any skin problems that may develop. tified.	
Other conditions affecting wo	rkers exposure	
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
8.2.8. Control of worker exposu	ure: Non-industrial spraying (PROC11)	
Product (article) characteristic	:s	
Covers percentage substance in	the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in	articles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational of	conditions and measures	
Avoid direct skin contact with pro (tested to EN374) if hand contact occur. Wash off any skin contam	seek immediate medical assistance. oduct. Identify potential areas for indirect skin contact. Wear gloves at with substance likely. Clean up contamination/spills as soon as they nination immediately. Provide basic employee training to prevent / rt any skin problems that may develop. tified.	
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	: Assumes use at not more than 20°C above ambient temperature.
3.2.9. Control of worker ex	posure: Treatment of articles by dipping and pouring (PROC13)
Product (article) characte	ristics
Covers percentage substar	nce in the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contain	ed in articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisation	onal conditions and measures
Avoid direct skin contact wi (tested to EN374) if hand c occur. Wash off any skin co	then seek immediate medical assistance. ith product. Identify potential areas for indirect skin contact. Wear gloves ontact with substance likely. Clean up contamination/spills as soon as they ontamination immediately. Provide basic employee training to prevent / report any skin problems that may develop. s identified.
Avoid direct skin contact wi (tested to EN374) if hand c occur. Wash off any skin co minimise exposures and to	ith product. Identify potential areas for indirect skin contact. Wear gloves ontact with substance likely. Clean up contamination/spills as soon as they ontamination immediately. Provide basic employee training to prevent / report any skin problems that may develop. s identified.

8.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Protection Target	Exposure estimate	RCR
Freshwater	0,0219 μg/l (EUSES)	0,024
Sea water	0,002 μg/l (EUSES)	0,002
Freshwater sediment	0,0523 mg/kg wet weight (EUSES)	0,024
Sea sediment	0,0048 mg/kg wet weight (EUSES)	0,002
Soil	0,105 µg/kg wet weight (EUSES)	0,000
Air	0,0061 µg/m3	

Additional information on exposure estimation

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Common practices vary across sites thus conservative process release estimates used.

8.3.2. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.3. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.4. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.5. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.7. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.8. Worker exposure: Non-industrial spraying (PROC11)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.3.9. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

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Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

8.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 9: Use as a cleaning agent – consumer; Consumer uses (SU21). 9.1. Title section **Exposure Scenario name** Use as a cleaning agent - consumer : **Structured Short Title** Use as a cleaning agent - consumer; Consumer uses (SU21). 1 Substance dodec-1-ene 1 EC-No.: 203-968-4 Environment CS₁ Use as a cleaning agent – consumer ERC8a. ERC8d Consumer CS 2 General measures applicable to all activities, General measures (skin PC3 irritants) CS 3 General measures applicable to all activities, General measures (skin PC4 irritants) CS 4 General measures applicable to all activities, General measures (skin PC8 irritants) CS 5 General measures applicable to all activities, General measures (skin PC9a irritants) CS 6 General measures applicable to all activities, General measures (skin PC9b irritants) CS7 General measures applicable to all activities, General measures (skin PC9c irritants) CS 8 General measures applicable to all activities, General measures (skin PC24 irritants) CS 9 General measures applicable to all activities, General measures (skin **PC35** irritants) **CS 10** General measures applicable to all activities, General measures (skin PC38 irritants) 9.2. Conditions of use affecting exposure 9.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) Product (article) characteristics Covers percentage substance in the product up to 100 %. Amount used (or contained in articles), frequency and duration of use/exposure Maximum allowable site tonnage 14 kg/day 1

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(MSafe)

Release type Emission days

: 365

Wide dispersive use

Conditions and measures related to treatment of waste (including article waste)

5

:

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Other conditions affecting environmental exposure

Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

9.2.2. Control of consumer exposure: Air care products (PC3)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature: Assumes use at not more than 20°C above ambient
temperature.

9.2.3. Control of consumer exposure: Anti-Freeze and de-icing products (PC4)

Product (article) characteristics		
Covers percentage substance in the product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
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Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

9.2.4. Control of consumer exposure: Biocidal products (PC8)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
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Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

9.2.5. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Product (article) characteristics		
Covers percentage substance in the product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used (or contained in	articles), frequency and duration of use/exposure	
Amount used (or contained in Duration	articles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours	

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Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

9.2.6. Control of consumer exposure: Fillers, putties, plasters, modelling clay (PC9b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

 Temperature
 : Assumes use at not more than 20°C above ambient temperature.

9.2.7. Control of consumer exposure: Finger paints (PC9c)

Product (article) characteristics		
Covers percentage substance in the product up to 100 %.		
Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Conditions and measures related to personal protection, hygiene and health evaluation		
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Avoid direct skin contact with pro- (tested to EN374) if hand contact occur. Wash off any skin contami	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they ination immediately. Provide basic employee training to prevent / t any skin problems that may develop. ified.		
Other conditions affecting consumers exposure			
Temperature	: Assumes use at not more than 20°C above ambient temperature.		
9.2.8. Control of consumer exp	osure: Lubricants, greases, release products (PC24)		
Product (article) characteristic	s		
Covers percentage substance in	the product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in	articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours		
Conditions and measures related	ted to personal protection, hygiene and health evaluation		
Avoid direct skin contact with pro- (tested to EN374) if hand contact occur. Wash off any skin contami minimise exposures and to report No other specific measures ident			
Other conditions affecting con	sumers exposure		
Temperature	: Assumes use at not more than 20°C above ambient temperature.		
9.2.9. Control of consumer exp	osure: Washing and cleaning products (PC35)		
Product (article) characteristic	s		
Covers percentage substance in	the product up to 100 %.		
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained in articles), frequency and duration of use/exposure			
Duration	: Covers daily exposures up to 8 hours		
Conditions and measures rela	ted to personal protection, hygiene and health evaluation		
Avoid direct skin contact with pro-	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they 92/155		

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No other specific measures ide		
Other conditions affecting c	onsumers exposure	
Temperature	: Assumes use at not more th temperature.	an 20°C above ambient
9.2.10. Control of consumer o	exposure: Welding and soldering pro	ducts, flux products (PC38)
Product (article) characteris	tics	
Covers percentage substance	in the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0. and Pressure	.5 kPa at Standard Temperature
Amount used (or contained	in articles), frequency and duration o	f use/exposure
Duration	: Covers daily exposures up t	o 8 hours
Conditions and measures re	elated to personal protection, hygiene	and health evaluation
occur. Wash off any skin conta minimise exposures and to rep No other specific measures ide		ployee training to prevent /
occur. Wash off any skin conta minimise exposures and to rep	amination immediately. Provide basic emport any skin problems that may develop entified.	nployee training to prevent /
Deccur. Wash off any skin conta minimise exposures and to rep No other specific measures ide Other conditions affecting c Temperature 9.3. Exposure estimation a 9.3.1. Environmental release Inclusion into or onto article,	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more th temperature. and reference to its source and exposure: Widespread use of note, indoor) (ERC8a) / Widespread use of note.	on-reactive processing aid (no
Deccur. Wash off any skin conta minimise exposures and to rep No other specific measures ide Other conditions affecting c Temperature 9.3. Exposure estimation a 9.3.1. Environmental release Inclusion into or onto article, Protection Target	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more th temperature. and reference to its source and exposure: Widespread use of note, indoor) (ERC8a) / Widespread use of note, outdoor) (ERC8d)	nployee training to prevent / an 20°C above ambient on-reactive processing aid (no f non-reactive processing aid (
Deccur. Wash off any skin conta minimise exposures and to rep No other specific measures ide Other conditions affecting c Temperature 9.3. Exposure estimation a 9.3.1. Environmental release Inclusion into or onto article, Protection Target Freshwater	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more th temperature. and reference to its source and exposure: Widespread use of note, indoor) (ERC8a) / Widespread use of note, outdoor) (ERC8d) Exposure estimate	on-reactive processing aid (no f non-reactive processing aid aid (no f non-reactive processing aid aid f
Deccur. Wash off any skin contaninimise exposures and to reploy other specific measures ide Other conditions affecting c Other conditions affecting c Temperature D.3. Exposure estimation a D.3.1. Environmental release nclusion into or onto article, nclusion into or onto article, sea water	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more the temperature. and reference to its source and exposure: Widespread use of nore, indoor) (ERC8a) / Widespread use of nore, outdoor) (ERC8a) / Widespread use of nore, outdoor) (ERC8d) Exposure estimate 0,0567 µg/l (EUSES)	an 20°C above ambient on-reactive processing aid (no f non-reactive processing aid (RCR 0,063
Deccur. Wash off any skin conta minimise exposures and to rep No other specific measures ide Other conditions affecting c Temperature 9.3. Exposure estimation a 9.3.1. Environmental release Inclusion into or onto article, Protection Target Freshwater Sea water Freshwater sediment	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more the temperature. and reference to its source and exposure: Widespread use of notes, indoor) (ERC8a) / Widespread use of notes, outdoor) / (ERC8a) / Widespread use of notes, outdoor	an 20°C above ambient
Occur. Wash off any skin conta minimise exposures and to rep No other specific measures ide Other conditions affecting c Temperature 9.3. Exposure estimation a 9.3.1. Environmental release inclusion into or onto article,	amination immediately. Provide basic emport any skin problems that may develop entified. consumers exposure : Assumes use at not more the temperature. and reference to its source and exposure: Widespread use of notest indoor) (ERC8a) /	an 20°C above ambient

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Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

9.3.2. Consumer exposure: Air care products (PC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.3. Consumer exposure: Anti-Freeze and de-icing products (PC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.4. Consumer exposure: Biocidal products (PC8)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.5. Consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.6. Consumer exposure: Fillers, putties, plasters, modelling clay (PC9b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.7. Consumer exposure: Finger paints (PC9c)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.8. Consumer exposure: Lubricants, greases, release products (PC24)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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9.3.9. Consumer exposure: Washing and cleaning products (PC35)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.3.10. Consumer exposure: Welding and soldering products, flux products (PC38)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

9.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 10: Use in Oil and Gas field drilling and production operations - Industrial; Industrial uses (SU3).

10.1. Title section

Exposure Scenario name	: Use in Oil and Gas field drilling and production operations - Industrial
Structured Short Title	: Use in Oil and Gas field drilling and production operations - Industrial; Industrial uses (SU3).
Substance	: dodec-1-ene <u>EC-No.:</u> 203-968-4

Environment

CS 1	Use in Oil and Gas field drilling and production operations - Industrial	ERC4
Worker		
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8b

10.2. Conditions of use affecting exposure

10.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Amount used (or contained in articles), frequency and duration of use/exposure

Release type

Remarks

: Continuous release : Not applicable

Technical and organisational conditions and measures

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Discharge to the marine compartment prohibited.

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Conditions and measures related to treatment of waste (including article waste)

:

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

10.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

10.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

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No other specific measures identified. Other conditions affecting workers exposure Temperature Assumes use at not more than 20°C above ambient 1 temperature. 10.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration Covers daily exposures up to 8 hours 1 Technical and organisational conditions and measures Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting workers exposure Temperature Assumes use at not more than 20°C above ambient : temperature. 10.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product Liquid, vapour pressure < 0.5 kPa at Standard Temperature : and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Covers daily exposures up to 8 hours Duration : Technical and organisational conditions and measures Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they SDS Number:100000068203 98/155

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	mination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.
Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
10.2.6. Control of worker expo non dedicated-facilities (PROC	osure: Transfer of substance or mixture (charging/discharging) at C8a)
Product (article) characteristi	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained ir	n articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
Avoid direct skin contact with pr (tested to EN374) if hand conta occur. Wash off any skin contar	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves ct with substance likely. Clean up contamination/spills as soon as they mination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.
Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
10.2.7. Control of worker expo dedicated facilities (PROC8b)	osure: Transfer of substance or mixture (charging/discharging) at
Product (article) characteristi	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained ir	n articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves
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(tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

10.3. Exposure estimation and reference to its source

:

10.3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Additional information on exposure estimation

Quantitative exposure and risk assessment not possible due to lack of emissions to aquatic environment. Qualitative approach used to conclude safe use.

10.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

10.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

10.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

10.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

10.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

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A quantitative risk assessment is not required for human health.

10.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

10.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Discharge to aquatic environment is restricted by law and industry prohibits release.

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ES 11: Use in Oil and Gas field drilling and production operations – Professional; Professional uses (SU22).

11.1. Title section

Exposure Scenario name	:	Use in Oil and Gas field drilling and production operations – Professional
Structured Short Title	:	Use in Oil and Gas field drilling and production operations – Professional; Professional uses (SU22).
Substance	:	dodec-1-ene <u>EC-No.:</u> 203-968-4

Environment

Professional	CS 1 Use in Oil and Gas field drilling and production operations – Professional	ERC8d
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Worker

CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8b

11.2. Conditions of use affecting exposure

11.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Amount used (or contained in articles), frequency and duration of use/exposure

Release type

: Continuous release

Remarks : Not applicable

Technical and organisational conditions and measures

Discharge to the marine compartment prohibited.

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Conditions and measures related to treatment of waste (including article waste)

:

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

11.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

11.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

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No other specific measures identified. Other conditions affecting workers exposure Temperature Assumes use at not more than 20°C above ambient : temperature. 11.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Duration Covers daily exposures up to 8 hours 1 Technical and organisational conditions and measures Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified. Other conditions affecting workers exposure Temperature Assumes use at not more than 20°C above ambient : temperature. 11.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4) Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product Liquid, vapour pressure < 0.5 kPa at Standard Temperature : and Pressure Amount used (or contained in articles), frequency and duration of use/exposure Covers daily exposures up to 8 hours Duration : Technical and organisational conditions and measures Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they SDS Number:100000068203 104/155

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	nination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.
Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
11.2.6. Control of worker expo non dedicated-facilities (PROC	sure: Transfer of substance or mixture (charging/discharging) at C8a)
Product (article) characteristi	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	n articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
Avoid direct skin contact with pr (tested to EN374) if hand contact occur. Wash off any skin contact	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves ct with substance likely. Clean up contamination/spills as soon as they mination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.
Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
11.2.7. Control of worker expo dedicated facilities (PROC8b)	sure: Transfer of substance or mixture (charging/discharging) at
Product (article) characteristi	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	n articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
	n seek immediate medical assistance. roduct. Identify potential areas for indirect skin contact. Wear gloves
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(tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

11.3. Exposure estimation and reference to its source

:

11.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Additional information on exposure estimation

Quantitative exposure and risk assessment not possible due to lack of emissions to aquatic environment. Qualitative approach used to conclude safe use.

11.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

11.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

11.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

11.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

11.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

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A quantitative risk assessment is not required for human health.

11.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

11.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Discharge to aquatic environment is restricted by law and industry prohibits release.

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ES 12: L	ubricants - Industrial; Industrial uses (SU3).				
12.1. Titl	e section				
Exposur	e Scenario name : Lubricants - Industrial				
Structure	ed Short Title : Lubricants - Industrial; Industrial uses (SU3).				
Substan	ce : dodec-1-ene <u>EC-No.:</u> 203-968-4				
Environr	nent				
CS 1	Lubricants - Industrial	ERC4, ERC7			
Worker					
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1			
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2			
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3			
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4			
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC7			
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8a			
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC8b			
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC9			
CS 10	General measures applicable to all activities, General measures (skin irritants)	PROC10			
CS 11	General measures applicable to all activities, General measures (skin irritants)	PROC13			
CS 12	General measures applicable to all activities, General measures (skin irritants)	PROC17			
CS 13	General measures applicable to all activities, General measures (skin irritants)	PROC18			
12.2. Co	nditions of use affecting exposure				

12.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4) / Use of functional fluid at industrial site (ERC7)

Product (article) characteristics

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Covers percentage substance in the p	product up to 100 %.
Amount used (or contained in articl	es), frequency and duration of use/exposure
Maximum allowable site tonnage (MSafe)	: 21.739 kg/day
Release type	: Continuous release
Emission days	: 300
Technical and organisational condi	tions and measures
Risk from environmental exposure is a Air - minimum efficiency of 70 % Water - minimum efficiency of 96,4 %	driven by freshwater sediment.
Conditions and measures related to	o sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related to	o treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environr	nental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	Chemical production or refinery in closed process without with equivalent containment conditions (PROC1)
Product (article) characteristics	
Covers percentage substance in the p	product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articl	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condi	tions and measures
Do not ingest. If swallowed then seek Avoid direct skin contact with product.	immediate medical assistance. Identify potential areas for indirect skin contact. Wear gloves

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Other conditions affecting workers	exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
	Chemical production or refinery in closed continuous process e or processes with equivalent containment conditions
Product (article) characteristics	
Covers percentage substance in the p	product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in artic	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condi	tions and measures
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they in immediately. Provide basic employee training to prevent / skin problems that may develop.
Other conditions affecting workers	exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
	Manufacture or formulation in the chemical industry in closed ntrolled exposure or processes with equivalent containment
Product (article) characteristics	
Covers percentage substance in the p	product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in artic	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condi	tions and measures
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Avoid direct skin contact with prod (tested to EN374) if hand contact occur. Wash off any skin contami	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they nation immediately. Provide basic employee training to prevent / any skin problems that may develop. fied.
Other conditions affecting worl	kers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.5. Control of worker expose (PROC4)	ure: Chemical production where opportunity for exposure arises
Product (article) characteristics	5
Covers percentage substance in	the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in a	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational c	onditions and measures
Avoid direct skin contact with prod (tested to EN374) if hand contact occur. Wash off any skin contami	seek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they nation immediately. Provide basic employee training to prevent / any skin problems that may develop. fied.
Other conditions affecting worl	kers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.6. Control of worker exposi	ure: Industrial spraying (PROC7)
Product (article) characteristics	5
Covers percentage substance in	the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in a	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational c	onditions and measures
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(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting workers	exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.7. Control of worker exposure: non dedicated-facilities (PROC8a)	Transfer of substance or mixture (charging/discharging) at
Product (article) characteristics	
Covers percentage substance in the p	roduct up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articl	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational conditional	tions and measures
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting workers	exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.8. Control of worker exposure: dedicated facilities (PROC8b)	Transfer of substance or mixture (charging/discharging) at
Product (article) characteristics	
Covers percentage substance in the p	roduct up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articl	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational conditional	tions and measures
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Do not ingest. If swallowed then so Avoid direct skin contact with prod	
(tested to EN374) if hand contact occur. Wash off any skin contamin	duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they nation immediately. Provide basic employee training to prevent / any skin problems that may develop.
Other conditions affecting work	ers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.9. Control of worker exposu (dedicated filling line, including	re: Transfer of substance or mixture into small containers weighing) (PROC9)
Product (article) characteristics	
Covers percentage substance in the	he product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in a	rticles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational co	onditions and measures
Avoid direct skin contact with prod (tested to EN374) if hand contact occur. Wash off any skin contamir	eek immediate medical assistance. duct. Identify potential areas for indirect skin contact. Wear gloves with substance likely. Clean up contamination/spills as soon as they nation immediately. Provide basic employee training to prevent / any skin problems that may develop. fied.
Other conditions affecting work	ers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
12.2.10. Control of worker expos	sure: Roller application or brushing (PROC10)
12.2.10. Control of worker expos Product (article) characteristics	
Product (article) characteristics	
Product (article) characteristics Covers percentage substance in the Physical form of product	he product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature
Product (article) characteristics Covers percentage substance in the Physical form of product	he product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Product (article) characteristics Covers percentage substance in the Physical form of product Amount used (or contained in a	he product up to 100 %. : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure rticles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours

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(tested to EN374) if hand contact with s	dentify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting workers e	xposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
12.2.11. Control of worker exposure:	Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

12.2.12. Control of worker exposure: Lubrication at high energy conditions in metal working operations (PROC17)

Product (article) characteristics		
Covers percentage substance	in the product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in	n articles), frequency and duration of use/exposure	
Amount used (or contained in Duration	n articles), frequency and duration of use/exposure : Covers daily exposures up to 8 hours	
•	: Covers daily exposures up to 8 hours	

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Avoid direct skin contact with ((tested to EN374) if hand cont occur. Wash off any skin conta	act with substance likely. Clean up amination immediately. Provide ba port any skin problems that may de	r indirect skin contact. Wear gloves o contamination/spills as soon as they sic employee training to prevent /
Other conditions affecting w	orkers exposure	
Temperature	: Assumes use at not me temperature.	ore than 20°C above ambient
12.2.13. Control of worker ex conditions (PROC18)	posure: General greasing/lubric	ation at high kinetic energy
Product (article) characteris	tics	
Covers percentage substance	in the product up to 100 %.	
Physical form of product	: Liquid, vapour pressur and Pressure	e < 0.5 kPa at Standard Temperature
Amount used (or contained	in articles), frequency and dura	tion of use/exposure
Duration	: Covers daily exposure	s up to 8 hours
Technical and organisationa	I conditions and measures	
Avoid direct skin contact with ((tested to EN374) if hand cont occur. Wash off any skin conta	act with substance likely. Clean up amination immediately. Provide ba port any skin problems that may de	r indirect skin contact. Wear gloves o contamination/spills as soon as they sic employee training to prevent /
Other conditions affecting w	orkers exposure	
Temperature	: Assumes use at not mot temperature.	ore than 20°C above ambient
12.3.1. Environmental release	and reference to its source e and exposure: Use of non-rea icle) (ERC4) / Use of functional	ctive processing aid at industrial site fluid at industrial site (ERC7)
Protection Target	Exposure estimate	RCR
Freshwater	0,0227 μg/l (EUSES)	0,025
Sea water	0,0021 µg/l (EUSES)	0,002
Freshwater sediment	0,0544 mg/kg wet weight (EUSES)	0,025
Sea sediment	0,005 mg/kg wet weight (EU	SES) 0,002
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Soil	0,0024 mg/kg wet weight (EUSES)	0,001
Air	0,0456 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

12.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.6. Worker exposure: Industrial spraying (PROC7)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

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Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.9. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.10. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.11. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.12. Worker exposure: Lubrication at high energy conditions in metal working operations (PROC17)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.3.13. Worker exposure: General greasing/lubrication at high kinetic energy conditions (PROC18)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

12.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Alpha	SAFE Plus® 1-DODECENE	TY DATA SHEET
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		Dute 2020 01 02
	ubricants - Professional; Professional uses (SU22).	
13.1. Titl	e section	
Exposur	e Scenario name : Lubricants - Professional	
Structur	ed Short Title : Lubricants - Professional; Professional uses (S	SU22).
Substan	ce : dodec-1-ene <u>EC-No.:</u> 203-968-4	
Environr	nent	
CS 1	Lubricants - Professional	ERC8a, ERC8d, ERC9a, ERC9b
Worker		
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC4
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC8b
CS 8	General measures applicable to all activities, General measures (skin irritants)	PROC9
CS 9	General measures applicable to all activities, General measures (skin irritants)	PROC10
CS 10	General measures applicable to all activities, General measures (skin irritants)	PROC11
CS 11	General measures applicable to all activities, General measures (skin irritants)	PROC13
CS 12	General measures applicable to all activities, General measures (skin irritants)	PROC17
CS 13	General measures applicable to all activities, General measures (skin irritants)	PROC18
CS 14	General measures applicable to all activities, General measures (skin irritants)	PROC20
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13.2. Conditions of use affecting exposure

13.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) / Widespread use of functional fluid (indoor) (ERC9a) / Widespread use of functional fluid (indoor)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Amount used (or contained in articles), frequency and duration of use/exposure

:

:

Maximum allowable site tonnage : 9 kg/day (MSafe)

Release type

Emission days

300

Wide dispersive use

Technical and organisational conditions and measures

Risk from environmental exposure is driven by soil. Air - minimum efficiency of 0 %

Water - minimum efficiency of 96,4 %

Conditions and measures related to sewage treatment plant

STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d

Conditions and measures related to treatment of waste (including article waste)

Waste treatment	: External treatment and disposal of waste should comply with
	applicable local and/or national regulations.

Other conditions affecting environmental exposure

Receiving surface water flow		18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

13.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers percentage substance in the	e product up to 100 %.	
Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperatu and Pressure		
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Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

13.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

13.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

SDS Number:100000068203

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Physical form of product	: Liquid, vapour presso and Pressure	ure < 0.5 kPa at Standard Temperature
Amount used (or contained in articl	es), frequency and dur	ation of use/exposure
Duration	: Covers daily exposur	es up to 8 hours
Technical and organisational condi	ions and measures	
Do not ingest. If swallowed then seek Avoid direct skin contact with product. (tested to EN374) if hand contact with occur. Wash off any skin contaminatio minimise exposures and to report any No other specific measures identified.	Identify potential areas f substance likely. Clean o n immediately. Provide b	or indirect skin contact. Wear gloves up contamination/spills as soon as they basic employee training to prevent /
Other conditions affecting workers	exposure	
Temperature	Assumes use at not r temperature.	nore than 20°C above ambient
13.2.5. Control of worker exposure: (PROC4)	Chemical production w	where opportunity for exposure arises
Product (article) characteristics		
Covers percentage substance in the p	roduct up to 100 %.	
Physical form of product	: Liquid, vapour presso and Pressure	ure < 0.5 kPa at Standard Temperature
Amount used (or contained in articl	es), frequency and dur	ation of use/exposure
Duration	: Covers daily exposur	es up to 8 hours
Technical and organisational conditional	ions and measures	
Do not ingest. If swallowed then seek Avoid direct skin contact with product. (tested to EN374) if hand contact with occur. Wash off any skin contaminatio minimise exposures and to report any No other specific measures identified.	Identify potential areas f substance likely. Clean i n immediately. Provide b	or indirect skin contact. Wear gloves up contamination/spills as soon as they basic employee training to prevent /
Other conditions affecting workers	exposure	
Temperature	Assumes use at not r temperature.	nore than 20°C above ambient
13.2.6. Control of worker exposure: non dedicated-facilities (PROC8a)	Fransfer of substance of	or mixture (charging/discharging) at
Product (article) characteristics		
Covers percentage substance in the p	roduct up to 100 %.	
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Version 5.3	Revision Date 2020-07-02
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condit	ions and measures
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting workers of	exposure
Temperature :	: Assumes use at not more than 20°C above ambient temperature.
13.2.7. Control of worker exposure: 1 dedicated facilities (PROC8b)	Transfer of substance or mixture (charging/discharging) at
Product (article) characteristics	
Covers percentage substance in the pr	roduct up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in article	es), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational condit	ions and measures
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting workers e	exposure
Temperature :	: Assumes use at not more than 20°C above ambient temperature.
13.2.8. Control of worker exposure: (dedicated filling line, including weig	Transfer of substance or mixture into small containers Jhing) (PROC9)
Product (article) characteristics	
Covers percentage substance in the pr	roduct up to 100 %.
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Physical form of product	:	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in artic	cles	s), frequency and duration of use/exposure
Duration	:	Covers daily exposures up to 8 hours
Technical and organisational cond	litic	ons and measures
(tested to EN374) if hand contact with	t. Id n su on i y sk	entify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting workers	s ex	posure
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
13.2.9. Control of worker exposure:	Ro	oller application or brushing (PROC10)
Product (article) characteristics		
Covers percentage substance in the	pro	duct up to 100 %.
Physical form of product	:	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in artic	les	s), frequency and duration of use/exposure
Duration	:	Covers daily exposures up to 8 hours
Technical and organisational cond	litic	ons and measures
(tested to EN374) if hand contact with	t. Id n su on i y sk	entify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting workers	s ex	posure
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
13.2.10. Control of worker exposure	e: N	Ion-industrial spraying (PROC11)
Product (article) characteristics		
Covers percentage substance in the	pro	duct up to 100 %.
Physical form of product	:	Liquid, vapour pressure < 0.5 kPa at Standard Temperature
SDS Number:100000068203		123/155

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and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

5 Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

13.2.11. Control of worker exposure: Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

5

Duration

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient 1 temperature.

13.2.12. Control of worker exposure: Lubrication at high energy conditions in metal working operations (PROC17)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Liquid, vapour pressure < 0.5 kPa at Standard Temperature :

Physical form of product

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and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

13.2.13. Control of worker exposure: General greasing/lubrication at high kinetic energy conditions (PROC18)

5

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

13.2.14. Control of worker exposure: Use of functional fluids in small devices (PROC20)

Product (article) characteristics Covers percentage substance in the product up to 100 %. Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature</td> SDS Number:100000068203 125/155

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and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

13.3. Exposure estimation and reference to its source

13.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) / Widespread use of functional fluid (indoor) (ERC9a) / Widespread use of functional fluid (outdoor) (ERC9b)

Protection Target	Exposure estimate	RCR
Freshwater	0,107 μg/l (EUSES)	0,118
Sea water	0,0105 μg/l (EUSES)	0,012
Freshwater sediment	0,255 mg/kg wet weight (EUSES)	0,119
Sea sediment	0,025 mg/kg wet weight (EUSES)	0,012
Soil	0,217 mg/kg wet weight (EUSES)	0,124
Air	0,0046 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

13.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

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A quantitative risk assessment is not required for human health.

13.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.8. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.9. Worker exposure: Roller application or brushing (PROC10)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.10. Worker exposure: Non-industrial spraying (PROC11)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.11. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

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Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.12. Worker exposure: Lubrication at high energy conditions in metal working operations (PROC17)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.13. Worker exposure: General greasing/lubrication at high kinetic energy conditions (PROC18)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.3.14. Worker exposure: Use of functional fluids in small devices (PROC20)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

13.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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SAFETY DATA SHEET

Revision Date 2020-07-02 ES 14: Lubricants - Consumer; Consumer uses (SU21). 14.1. Title section **Exposure Scenario name** Lubricants - Consumer : **Structured Short Title** Lubricants - Consumer; Consumer uses (SU21). : Substance dodec-1-ene : EC-No.: 203-968-4 Environment CS₁ Lubricants - Consumer ERC8a. ERC8d, ERC9a, ERC9b Consumer CS 2 General measures applicable to all activities, General measures (skin PC1 irritants) CS 3 General measures applicable to all activities, General measures (skin PC24 irritants) CS 4 General measures applicable to all activities, General measures (skin PC31 irritants) 14.2. Conditions of use affecting exposure 14.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) / Widespread use of functional fluid (indoor) (ERC9a) / Widespread use of functional fluid (outdoor) (ERC9b) Product (article) characteristics Covers percentage substance in the product up to 100 %. Amount used (or contained in articles), frequency and duration of use/exposure Maximum allowable site tonnage : 9 kg/day (MSafe) Wide dispersive use Release type 2 Emission days : 365 Conditions and measures related to treatment of waste (including article waste) Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations. Other conditions affecting environmental exposure SDS Number:10000068203 129/155

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Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

14.2.2. Control of consumer exposure: Adhesives, sealants (PC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

14.2.3. Control of consumer exposure: Lubricants, greases, release products (PC24)

Product (article) characteristics	
Covers percentage substance in the p	product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articl	les), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Conditions and measures related to	o personal protection, hygiene and health evaluation
(tested to EN374) if hand contact with	Identify potential areas for indirect skin contact. Wear gloves substance likely. Clean up contamination/spills as soon as they n immediately. Provide basic employee training to prevent /
Other conditions affecting consume	ers exposure
SDS Number:100000068203	130/155

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Temperature

Assumes use at not more than 20°C above ambient temperature.

14.2.4. Control of consumer exposure: Polishes and wax blends (PC31)

:

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

no other specific measures identified.

Other conditions affecting consumers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

14.3. Exposure estimation and reference to its source

14.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) / Widespread use of functional fluid (indoor) (ERC9a) / Widespread use of functional fluid (outdoor) (ERC9b)

Protection Target	Exposure estimate	RCR
Freshwater	0,0915 µg/l (EUSES)	0,102
Sea water	0,0089 μg/l (EUSES)	0,001
Freshwater sediment	0,219 mg/kg wet weight (EUSES)	0,102
Sea sediment	0,0214 mg/kg wet weight (EUSES)	0,001
Soil	0,178 mg/kg wet weight (EUSES)	0,102
Air	0,0038 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

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14.3.2. Consumer exposure: Adhesives, sealants (PC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

14.3.3. Consumer exposure: Lubricants, greases, release products (PC24)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

14.3.4. Consumer exposure: Polishes and wax blends (PC31)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

14.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

AlnhaP	SA Plus® 1-DODECENE	FETY DATA SHEET
Version 5.		sion Date 2020-07-02
ES 15: Fi	unctional Fluids - Industrial; Industrial uses (SU3).	
15.1. Title		
-	Scenario name : Functional Fluids - Industrial	
	ed Short Title : Functional Fluids - Industrial; Industrial use	es (SU3).
Substand	e : dodec-1-ene <u>EC-No.:</u> 203-968-4	
Environm	nent	
CS 1	Functional Fluids - Industrial	ERC7
Worker		
CS 2	General measures applicable to all activities, General measures (ski irritants)	n PROC1
CS 3	General measures applicable to all activities, General measures (ski irritants)	n PROC2
CS 4	General measures applicable to all activities, General measures (ski irritants)	n PROC3
CS 5	General measures applicable to all activities, General measures (ski irritants)	n PROC4
CS 6	General measures applicable to all activities, General measures (ski irritants)	n PROC8a
CS 7	General measures applicable to all activities, General measures (ski irritants)	n PROC8b
CS 8	General measures applicable to all activities, General measures (ski irritants)	n PROC9
15.2.1. Co Product (nditions of use affecting exposure ntrol of environmental exposure: Use of functional fluid at industrial (article) characteristics	site (ERC7)
Covers pe	ercentage substance in the product up to 100 %.	
Amount u	used (or contained in articles), frequency and duration of use/exposu	re
Maximum (MSafe)	allowable site tonnage : 32.287 kg/day	
Release t		
Emission	days : 300	
	I and organisational conditions and measures	
	environmental exposure is driven by freshwater sediment.	
SDS Num	ber:10000068203 133/155	

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Air - minimum efficiency of 0 %
Water - minimum efficiency of 96,4 %

Conditions and measures related to sewage treatment plant	
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d

Conditions and measures related to treatment of waste (including article waste)

Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure	

Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

15.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

	SAFETY DATA SHEET	
AlphaPlus® 1-DODECEN	E	
Version 5.3	Revision Date 2020-07-02	
	: Chemical production or refinery in closed continuous process re or processes with equivalent containment conditions	
Product (article) characteristics		
Covers percentage substance in the	product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in arti	cles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational cond	ditions and measures	
(tested to EN374) if hand contact wit	t. Identify potential areas for indirect skin contact. Wear gloves h substance likely. Clean up contamination/spills as soon as they ion immediately. Provide basic employee training to prevent / y skin problems that may develop.	
Other conditions affecting worker	s exposure	
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
	: Manufacture or formulation in the chemical industry in closed controlled exposure or processes with equivalent containment	
Product (article) characteristics		
Covers percentage substance in the	product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational cond	ditions and measures	
(tested to EN374) if hand contact wit	t. Identify potential areas for indirect skin contact. Wear gloves h substance likely. Clean up contamination/spills as soon as they ion immediately. Provide basic employee training to prevent / y skin problems that may develop.	
Other conditions affecting worker	s exposure	
Temperature	: Assumes use at not more than 20°C above ambient	

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temperature.

15.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

15.2.6. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characterist	ics
Covers percentage substance	in the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained i	n articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

15.2.7. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product : Liquid, vapour pressure < 0.5 kPa at Standard Temperature

:

:

and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

15.2.8. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

15.3. Exposure estimation and reference to its source

:

15.3.1. Environmental release and exposure: Use of functional fluid at industrial site (ERC7)

Protection Target	Exposure estimate	RCR
Freshwater	0,0232 μg/l (EUSES)	0,026
Sea water	0,0021 µg/l (EUSES)	0,002
Freshwater sediment	0,0554 mg/kg wet weight (EUSES)	0,026
Sea sediment	0,0051 mg/kg wet weight (EUSES)	0,002
Soil	0,0039 mg/kg wet weight (EUSES)	0,002
Air	0,230 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

15.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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15.3.6. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.3.8. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

15.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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		Date 2020-07-02
ES 16: F	unctional Fluids - Professional; Professional uses (SU22).	
16.1. Titl	e section	
Exposure	Scenario name : Functional Fluids - Professional	
Structure	d Short Title : Functional Fluids - Professional; Professional	uses (SU22).
Substand	e : dodec-1-ene <u>EC-No.:</u> 203-968-4	
Environn	nent	
CS 1	Functional Fluids - Professional	ERC9a, ERC9b
Worker		
CS 2	General measures applicable to all activities, General measures (skin irritants)	PROC1
CS 3	General measures applicable to all activities, General measures (skin irritants)	PROC2
CS 4	General measures applicable to all activities, General measures (skin irritants)	PROC3
CS 5	General measures applicable to all activities, General measures (skin irritants)	PROC8a
CS 6	General measures applicable to all activities, General measures (skin irritants)	PROC9
CS 7	General measures applicable to all activities, General measures (skin irritants)	PROC20
16.2.1. Co	nditions of use affecting exposure Introl of environmental exposure: Widespread use of functional fluid (inc ad use of functional fluid (outdoor) (ERC9b)	loor) (ERC9a) /
Product (article) characteristics	
Covers pe	ercentage substance in the product up to 100 %.	
Amount	used (or contained in articles), frequency and duration of use/exposure	
Maximum (MSafe)	allowable site tonnage : 18 kg/day	
Release t		
Emission	days : 300	
Technica	l and organisational conditions and measures	
Risk from	environmental exposure is driven by freshwater sediment.	
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Air - minimum efficiency of 0 %
Water - minimum efficiency of 96,4 %

Conditions and measures related to sewage treatment plant	
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d

Conditions and measures related to treatment of waste (including article waste)

Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure	

Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

16.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

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	Chemical production or refinery in closed continuous process re or processes with equivalent containment conditions	
Product (article) characteristics		
Covers percentage substance in the	product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in artic	cles), frequency and duration of use/exposure	
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational cond	litions and measures	
(tested to EN374) if hand contact with	t. Identify potential areas for indirect skin contact. Wear gloves h substance likely. Clean up contamination/spills as soon as they on immediately. Provide basic employee training to prevent / y skin problems that may develop.	
Other conditions affecting workers	s exposure	
Temperature	: Assumes use at not more than 20°C above ambient temperature.	
16.2.4. Control of worker exposure: batch processes with occasional co condition (PROC3)	: Manufacture or formulation in the chemical industry in closed ontrolled exposure or processes with equivalent containment	
Product (article) characteristics		
Covers percentage substance in the	product up to 100 %.	
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure	
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	: Covers daily exposures up to 8 hours	
Technical and organisational cond	litions and measures	
(tested to EN374) if hand contact with occur. Wash off any skin contaminati minimise exposures and to report any	t. Identify potential areas for indirect skin contact. Wear gloves h substance likely. Clean up contamination/spills as soon as they on immediately. Provide basic employee training to prevent / y skin problems that may develop.	
No other specific measures identified	l	
Other conditions affecting workers		
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temperature.

16.2.5. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

16.2.6. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

 Physical form of product
 : Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure</td>

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance. Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

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Temperature

Assumes use at not more than 20°C above ambient temperature.

16.2.7. Control of worker exposure: Use of functional fluids in small devices (PROC20)

:

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

Duration

: Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

16.3. Exposure estimation and reference to its source

16.3.1. Environmental release and exposure: Widespread use of functional fluid (indoor) (ERC9a) / Widespread use of functional fluid (outdoor) (ERC9b)

Protection Target	Exposure estimate	RCR
Freshwater	0,086 μg/l (EUSES)	0,096
Sea water	0,0084 μg/l (EUSES)	0,009
Freshwater sediment	0,206 mg/kg wet weight (EUSES)	0,096
Sea sediment	0,0201 mg/kg wet weight (EUSES)	0,009
Soil	0,164 mg/kg wet weight (EUSES)	0,094
Air	0,0230 µg/m3	

Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

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16.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.3.5. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.3.6. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.3.7. Worker exposure: Use of functional fluids in small devices (PROC20)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

16.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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ES 17: Use in polymer production – industrial; Industrial uses (SU3). 17.1. Title section **Exposure Scenario name** Use in polymer production - industrial 5 **Structured Short Title** Use in polymer production – industrial; Industrial uses (SU3). 1 Substance dodec-1-ene 1 EC-No.: 203-968-4 Environment CS₁ Use in polymer production – industrial ERC4, ERC6c Worker CS₂ General measures applicable to all activities, General measures (skin PROC1 irritants) CS 3 General measures applicable to all activities, General measures (skin PROC2 irritants) CS₄ General measures applicable to all activities, General measures (skin PROC3 irritants) CS 5 General measures applicable to all activities, General measures (skin PROC4 irritants) CS 6 General measures applicable to all activities, General measures (skin PROC5 irritants) CS7 General measures applicable to all activities, General measures (skin PROC6 irritants) CS 8 General measures applicable to all activities, General measures (skin PROC8a irritants) CS 9 General measures applicable to all activities, General measures (skin PROC8b irritants) **CS 10** General measures applicable to all activities, General measures (skin PROC14 irritants) **CS 11** General measures applicable to all activities, General measures (skin PROC15 irritants)

17.2. Conditions of use affecting exposure

17.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4) / Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) (ERC6c)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Amount used (or contained in articles), frequency and duration of use/exposure

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Maximum allowable site tonnage (MSafe)	: 42.735 kg/day
Release type	: Continuous release
Emission days	: 300
Technical and organisational cond	itions and measures
Risk from environmental exposure is Air - minimum efficiency of 80 % Water - minimum efficiency of 96,4 %	
Conditions and measures related t	o sewage treatment plant
STP type	: Municipal sewage treatment plant
STP sludge treatment	 Prevent discharge of undissolved substance to or recover from wastewater. Do not apply industrial sludge to natural soils.
	Sewage sludge should be incinerated, contained or reclaimed.
STP effluent	: 2.000 m3/d
Conditions and measures related t	o treatment of waste (including article waste)
Waste treatment	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environ	mental exposure
Receiving surface water flow	: 18.000 m3/d
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100
	Chemical production or refinery in closed process without s with equivalent containment conditions (PROC1)
Product (article) characteristics	
Covers percentage substance in the	product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in artic	eles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational cond	itions and measures
(tested to EN374) if hand contact with	. Identify potential areas for indirect skin contact. Wear gloves n substance likely. Clean up contamination/spills as soon as they on immediately. Provide basic employee training to prevent / / skin problems that may develop.
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Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
	sure: Chemical production or refinery in closed continuous process posure or processes with equivalent containment conditions
Product (article) characteristi	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
Avoid direct skin contact with pr (tested to EN374) if hand contact occur. Wash off any skin contact	a seek immediate medical assistance. oduct. Identify potential areas for indirect skin contact. Wear gloves ct with substance likely. Clean up contamination/spills as soon as they nination immediately. Provide basic employee training to prevent / ort any skin problems that may develop. ntified.
Other conditions affecting wo	orkers exposure
Temperature	: Assumes use at not more than 20°C above ambient temperature.
	sure: Manufacture or formulation in the chemical industry in closed nal controlled exposure or processes with equivalent containment
Product (article) characteristic	cs
Covers percentage substance in	n the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in	articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisational	conditions and measures
Avoid direct skin contact with pr (tested to EN374) if hand contact	a seek immediate medical assistance. oduct. Identify potential areas for indirect skin contact. Wear gloves ct with substance likely. Clean up contamination/spills as soon as they nination immediately. Provide basic employee training to prevent /
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minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

: Assumes use at not more than 20°C above ambient temperature.

17.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Covers percentage substance in the product up to 100 %.

Physical form of product

: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure

Amount used (or contained in articles), frequency and duration of use/exposure

:

:

Duration

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Do not ingest. If swallowed then seek immediate medical assistance.

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. No other specific measures identified.

Other conditions affecting workers exposure

Temperature

Assumes use at not more than 20°C above ambient temperature.

17.2.6. Control of worker exposure: Mixing or blending in batch processes (PROC5)

Product (article) charac	teristics
Covers percentage subst	ance in the product up to 100 %.
Physical form of product	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or conta	ined in articles), frequency and duration of use/exposure
Duration	: Covers daily exposures up to 8 hours
Technical and organisa	tional conditions and measures
Avoid direct skin contact (tested to EN374) if hand	ed then seek immediate medical assistance. with product. Identify potential areas for indirect skin contact. Wear gloves contact with substance likely. Clean up contamination/spills as soon as they contamination immediately. Provide basic employee training to prevent /
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minimise exposures and to report any No other specific measures identified		roblems that may develop.
Other conditions affecting workers	s expos	ure
Temperature		sumes use at not more than 20°C above ambient operature.
17.2.7. Control of worker exposure:	Calend	dering operations (PROC6)
Product (article) characteristics		
Covers percentage substance in the p	product	up to 100 %.
Physical form of product		uid, vapour pressure < 0.5 kPa at Standard Temperature d Pressure
Amount used (or contained in artic	cles), fr	equency and duration of use/exposure
Duration	: Co	vers daily exposures up to 8 hours
Technical and organisational cond	litions a	and measures
(tested to EN374) if hand contact with	t. Identif n substa on imm y skin pi	ty potential areas for indirect skin contact. Wear gloves ance likely. Clean up contamination/spills as soon as they ediately. Provide basic employee training to prevent /
Other conditions affecting workers	s expos	ure
Temperature		sumes use at not more than 20°C above ambient nperature.
17.2.8. Control of worker exposure: non dedicated-facilities (PROC8a)	Transf	fer of substance or mixture (charging/discharging) at
Product (article) characteristics		
Covers percentage substance in the	product	up to 100 %.
Physical form of product		juid, vapour pressure < 0.5 kPa at Standard Temperature d Pressure
Amount used (or contained in artic	cles), fr	equency and duration of use/exposure
Duration	: Co	vers daily exposures up to 8 hours
Technical and organisational cond	litions a	and measures
(tested to EN374) if hand contact with	t. Identif n substa	liate medical assistance. Ty potential areas for indirect skin contact. Wear gloves ance likely. Clean up contamination/spills as soon as they ediately. Provide basic employee training to prevent /
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minimise exposures and to report any sl No other specific measures identified.	kin problems that may develop.
Other conditions affecting workers ex	kposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
17.2.9. Control of worker exposure: Tr dedicated facilities (PROC8b)	ransfer of substance or mixture (charging/discharging) at
Product (article) characteristics	
Covers percentage substance in the pro	oduct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articles	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Technical and organisational condition	ons and measures
(tested to EN374) if hand contact with su	dentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they immediately. Provide basic employee training to prevent /
Other conditions affecting workers ex	kposure
Temperature :	Assumes use at not more than 20°C above ambient temperature.
17.2.10. Control of worker exposure: 1 (PROC14)	Fabletting, compression, extrusion, pelettisation, granulation
Product (article) characteristics	
Covers percentage substance in the pro	duct up to 100 %.
Physical form of product :	Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure
Amount used (or contained in articles	s), frequency and duration of use/exposure
Duration :	Covers daily exposures up to 8 hours
Technical and organisational condition	ons and measures
	nmediate medical assistance. dentify potential areas for indirect skin contact. Wear gloves ubstance likely. Clean up contamination/spills as soon as they
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Other conditions affecting	workers exposure			
Temperature	: Assumes use at not more th temperature.	an 20°C above ambient		
17.2.11. Control of worker e	exposure: Use as laboratory reagent (I	PROC15)		
Product (article) character	istics			
Covers percentage substanc	ce in the product up to 100 %.			
Physical form of product	: Liquid, vapour pressure < 0 and Pressure	: Liquid, vapour pressure < 0.5 kPa at Standard Temperature and Pressure		
Amount used (or contained	d in articles), frequency and duration o	of use/exposure		
Duration	: Covers daily exposures up	to 8 hours		
Technical and organisation	nal conditions and measures			
Temperature	: Assumes use at not more the	an 20°C above ambient		
	temperature.			
17.3. Exposure estimatio 17.3.1. Environmental relea (no inclusion into or onto a	temperature. on and reference to its source use and exposure: Use of non-reactive article) (ERC4) / Use of monomer in pol not into/onto article) (ERC6c) Exposure estimate			
17.3. Exposure estimatio 17.3.1. Environmental relea no inclusion into or onto a ndustrial site (inclusion or Protection Target	on and reference to its source use and exposure: Use of non-reactive article) (ERC4) / Use of monomer in po not into/onto article) (ERC6c) Exposure estimate	werisation processes at		
17.3. Exposure estimatio 17.3.1. Environmental relea no inclusion into or onto a ndustrial site (inclusion or Protection Target Freshwater	on and reference to its source use and exposure: Use of non-reactive article) (ERC4) / Use of monomer in poin not into/onto article) (ERC6c) Exposure estimate 0,330 µg/l (EUSES)	RCR 0,366		
I7.3. Exposure estimatio I7.3.1. Environmental relea no inclusion into or onto a ndustrial site (inclusion or Protection Target Freshwater Sea water	on and reference to its source ase and exposure: Use of non-reactive article) (ERC4) / Use of monomer in po- not into/onto article) (ERC6c) Exposure estimate 0,330 μg/l (EUSES) 0,0328 μg/l (EUSES)	RCR 0,366 0,036		
17.3. Exposure estimatio 17.3.1. Environmental relea no inclusion into or onto a ndustrial site (inclusion or Protection Target Freshwater Sea water Freshwater sediment	on and reference to its source use and exposure: Use of non-reactive article) (ERC4) / Use of monomer in po not into/onto article) (ERC6c) Exposure estimate 0,330 µg/l (EUSES)	RCR 0,366 0,036		
17.3. Exposure estimatio 17.3.1. Environmental relea (no inclusion into or onto a industrial site (inclusion or Protection Target Freshwater	on and reference to its source use and exposure: Use of non-reactive inticle) (ERC4) / Use of monomer in pole not into/onto article) (ERC6c) Exposure estimate 0,330 μg/l (EUSES) 0,0328 μg/l (EUSES) 0,789 mg/kg wet weight (EUSES) 0,0784 mg/kg wet weight	RCR 0,366 0,036 0,368 0,037 0		

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Additional information on exposure estimation

Common practices vary across sites thus conservative process release estimates used.

17.3.2. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.3. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.4. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.5. Worker exposure: Chemical production where opportunity for exposure arises (PROC4)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.6. Worker exposure: Mixing or blending in batch processes (PROC5)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.7. Worker exposure: Calendering operations (PROC6)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

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17.3.9. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.10. Worker exposure: Tabletting, compression, extrusion, pelettisation, granulation (PROC14)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.3.11. Worker exposure: Use as laboratory reagent (PROC15)

Additional information on exposure estimation

A quantitative risk assessment is not required for human health.

17.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).