

## Methylcyclohexane

Version 1.7

Revision Date 2017-12-18

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

### Product information

Product Name Material	:	Methylcyclohexane 1098852, 1021714, 1021712, 1028351, 1021711, 1024851,
		1028352, 1024850, 1021713

### EC-No.Registration number

Chemical name	CAS-No.	Legal Entity
	EC-No.	Registration number
	Index No.	
Methylcyclohexane	108-87-2	
	203-624-3	01-2119556887-18-XXXX
	601-018-00-7	

Relevant Identified Uses Supported	<ul> <li>Solvent in other applications</li> <li>Use in polymer processing – professional, Solvent</li> <li>Use in coatings – professional, Solvent</li> <li>Lubricants - Professional, Solvent</li> <li>Use as a cleaning agent – professional, Solvent</li> <li>Solvent in other applications- Professional</li> </ul>
Company	<ul> <li>Chevron Phillips Chemical Company LP Specialty Chemicals</li> <li>10001 Six Pines Drive The Woodlands, TX 77380</li> </ul>
Local	<ul> <li>Chevron Phillips Chemicals International N.V. Airport Plaza (Stockholm Building) Leonardo Da Vincilaan 19 1831 Diegem Belgium</li> </ul>
	SDS Requests: (800) 852-5530 Technical Information: (832) 813-4862 Responsible Party: Product Safety Group Email:sds@cpchem.com
Emergency telephone:	
SDS Number:100000014163	1/56

SAFETY DATA SHEET

Version 1.7

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Health: 866.442.9628 (North America 1.832.813.4984 (International Transport: CHEMTREC 800.424.9300 of Asia: CHEMWATCH (+612 9 <sup>-7</sup> EUROPE: BIG +32.14.58454 Mexico CHEMTREC 01-800-6 South America SOS-Cotec In Argentina: +(54)-1159839431	a) )) r 703.527.3887(int'l) 186 1132) China: 0532 8388 9090 5 (phone) or +32.14583516 (telefax) 681-9531 (24 hours) side Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Responsible Department :	Product Safety and Toxicology Group
Website :	www.CPChem.com
<b>SECTION 2: Hazards identification</b>	
Classification of the substance or r REGULATION (EC) No 1272/2008	nixture
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Skin irritation, Category 2	H315: Causes skin irritation.
Flammable liquids, Category 2	H225:

Specific target organ systemic toxicity single exposure, Category 3, Central nervous system Acute toxicity, Category 1 Causes skin irritation. H225: Highly flammable liquid and vapor. H336: May cause drowsiness or dizziness. H400:

Chronic aquatic toxicity, Category 2

H411: Toxic to aquatic life with long lasting effects.

Very toxic to aquatic life.

### Label elements

### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:		
Signal Word	:	Danger	
Hazard Statements	:	H225 H304	Highly flammable liquid and vapor. May be fatal if swallowed and enters airwavs.
		H315	Causes skin irritation.
		H336	May cause drowsiness or dizziness.
		H411	Toxic to aquatic life with long lasting effects.
Precautionary Statements	:	Prevention:	
		P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		P233	Keep container tightly closed.
		P240	Ground/bond container and receiving equipment.
		P243	Take precautionary measures against static
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lethvlcvclohexane			SAFETY DATA SHEET		
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	P273 P280	discharge. Avoid release to the Wear protective glov eye protection/ face	environment. es/ protective clothing/ protection.		
ECTION 3: Composition/inf	formation on ingree	dients			
Syponyms	: Cyclobeyyla	nethane			
Synonyms	Hexahydrote MCH Methylcyclo	bluene hexane (Pure Grade)			
Molecular formula	: C7H14				
Mixtures					
Hazardous ingredients					
Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]		
Methylcyclohexane	108-87-2 203-624-3 601-018-00-7	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	99,8 - 100		
For the full text of the H-S	tatements mentione	d in this Section, see Sectio	n 16.		
ECTION 4: First aid measu	res				
General advice	: Move out of sheet to the serious, pot-	dangerous area. Show this doctor in attendance. Mate entially fatal pneumonia if sv	material safety data rial may produce a vallowed or vomited.		
If inhaled	: Consult a pl place in rec	: Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.			
In case of skin contact	: If on skin, ri	: If on skin, rinse well with water. If on clothes, remove clothes.			
In case of eye contact	: Flush eyes lenses. Pro rinsing. If e	: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.			
If swallowed	: Keep respira an unconsci Take victim	atory tract clear. Never give ious person. If symptoms pe immediately to hospital.	anything by mouth to ersist, call a physician.		
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SECTION 5: Firefighting measu	res	
Flash point	:	-5,5 °C (22,1 °F) Method: Tagliabue Open Cup
Autoignition temperature	:	285 °C (545 °F)
Suitable extinguishing media	:	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. 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. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	:	Hydrocarbons. Carbon oxides.
SECTION 6: Accidental release	mea	asures
Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
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.
Methods for cleaning up	:	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).
SECTION 7: Handling and stora	ge	
Handling		
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Advice on safe handling	: Avoid for exposure contact w section 8 in the app static disc exhaust in be under local and	mation of aerosol. - obtain special ir ith skin and eyes. Smoking, eating blication area. Tal charges. Provide n work rooms. Op pressure. Dispos national regulatio	Do not breathe vapor nstructions before use For personal protect and drinking should be the precautionary mea sufficient air exchang- ben drum carefully as the of rinse water in according ns.	ers/dust. Avoid Avoid ion see be prohibited sures against e and/or content may cordance with
Advice on protection against fire and explosion	: Do not sp material. discharge only explo hot surfac	oray on an open fla Take necessary a (which might cau osion-proof equipt ces and sources o	ame or any other inca action to avoid static e ise ignition of organic ment. Keep away fror f ignition.	ndescent electricity vapors). Use m open flames,
Storage				
Requirements for storage areas and containers	: No smoki ventilatec carefully Observe	ng. Keep contain I place. Containe resealed and kept label precautions.	er tightly closed in a c rs which are opened r upright to prevent lea Electrical installation	dry and well- nust be akage. is / working
SECTION 8: Exposure control	materials Is/personal pro	must comply with	the technological saf	ety standards.
SECTION 8: Exposure control Ingredients with workpla	materials Is/personal pro ce control para	must comply with tection meters	the technological saf	ety standards.
SECTION 8: Exposure control Ingredients with workplac SK	materials	must comply with tection meters	the technological saf	ety standards.
SECTION 8: Exposure control Ingredients with workplac SK Zložky Methylcyclohexane	materials	must comply with tection meters Hodnota NPEL priemerný	Kontrolné parametre 200 ppm, 810 mg/m3	ety standards.
SECTION 8: Exposure control Ingredients with workplac SK Zložky Methylcyclohexane	materials	must comply with tection meters Hodnota NPEL priemerný NPEL krátkodobý	Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3	ety standards.
SECTION 8: Exposure control Ingredients with workpla SK Zložky Methylcyclohexane	materials Is/personal pro ce control para Podstata SK OEL SK OEL	must comply with tection meters Hodnota NPEL priemerný NPEL krátkodobý	Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3	ety standards.
SECTION 8: Exposure control Ingredients with workplac SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexano	materials	must comply with tection meters Hodnota NPEL priemerný NPEL krátkodobý Vrednost	Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3	ety standards.
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane	materials Is/personal pro ce control para Podstata SK OEL SK OEL Osnova SI OEL	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV	Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3 Parametri nadzora 500 ppm, 2.000 mg/m3	Poznámka
SECTION 8: Exposure control Ingredients with workplace SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes	materials Is/personal pro ce control para Podstata SK OEL SK OEL Osnova SI OEL Bases	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor	Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3 Parametri nadzora 500 ppm, 2.000 mg/m3	ety standards. Poznámka Pripomba Nota
SECTION 8: Exposure control Ingredients with workplace SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane	materials Is/personal pro ce control para Podstata SK OEL SK OEL Osnova SI OEL Bases PT OEL	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP	Kontrolné parametre         200 ppm, 810 mg/m3         400 ppm, 1.620 mg/m3         Parametri nadzora         500 ppm, 2.000 mg/m3         Parâmetros de controlo         400 ppm,	ety standards. Poznámka Pripomba Nota irritação do TRS, afeção do SNC
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervosc irritação do irritação do trato respiratór TRS	Is/personal pro         Is/personal pro         Ce control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         o central         io superior	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP	Kontrolné parametre         200 ppm, 810 mg/m3         400 ppm, 1.620 mg/m3         Parametri nadzora         500 ppm, 2.000 mg/m3         Parâmetros de controlo         400 ppm,	ety standards. Poznámka Pripomba Nota irritação do TRS, afeção do SNC,
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervosc irritação do irritação do trato respiratór TRS	Is/personal pro         Is/personal pro         Ce control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         ocentral         is superior	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP Wartość	<ul> <li>Kontrolné parametre</li> <li>200 ppm, 810 mg/m3</li> <li>400 ppm, 1.620 mg/m3</li> <li>Parametri nadzora</li> <li>500 ppm, 2.000 mg/m3</li> <li>Parâmetros de controlo</li> <li>400 ppm,</li> </ul>	ety standards.  Poznámka Pripomba Nota irritação do TRS, afeção do SNC,
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki	Is/personal pro         Is/personal pro         ce control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         ocentral         io superior         Podstawa         RL NDS	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP Wartość NDS	Kontrolné parametre         200 ppm, 810 mg/m3         400 ppm, 1.620 mg/m3         9         Parametri nadzora         500 ppm, 2.000 mg/m3         Parâmetros de controlo         400 ppm,         400 ppm,         200 ppm, 2.000 mg/m3	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga
SECTION 8: Exposure control Ingredients with workplace SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane	Podstata         SK OEL         SK OEL         SK OEL         SI OEL         Bases         PT OEL         o central io superior         Podstawa         PL NDS         PL NDS	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP Wartość NDS NDSch	Kontrolné parametre         200 ppm, 810 mg/m3         400 ppm, 1.620 mg/m3         900 ppm, 2.000 mg/m3         Parametri nadzora         500 ppm, 2.000 mg/m3         Parâmetros de controlo         400 ppm,         Parâmetros de controlo         400 ppm,         1.600 ppm,         1.600 mg/m3         3.000 mg/m3	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga
SECTION 8: Exposure control Ingredients with workplace SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane	Is/personal pro         Is/personal pro         Ce control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         ocentral         io superior         Podstawa         PL NDS         PL NDS	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP Wartość NDS NDSch	<ul> <li>Kontrolné parametre</li> <li>200 ppm, 810 mg/m3</li> <li>400 ppm, 1.620 mg/m3</li> <li>Parametri nadzora</li> <li>500 ppm, 2.000 mg/m3</li> <li>Parâmetros de controlo</li> <li>400 ppm,</li> </ul>	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane	Is/personal pro         Is/personal pro         Cc control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         o central io superior         Podstawa         PL NDS         PL NDS         Grunnlag	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor Valor VLE-MP Wartość NDS NDSch Verdi	<ul> <li>Kontrolné parametre</li> <li>200 ppm, 810 mg/m3</li> <li>400 ppm, 1.620 mg/m3</li> <li>Parametri nadzora</li> <li>500 ppm, 2.000 mg/m3</li> <li>Parâmetros de controlo</li> <li>400 ppm,</li> </ul>	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga  Nota
SECTION 8: Exposure control Ingredients with workplace SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane NO Komponenter Methylcyclohexane	materials         Is/personal pro         cc control para         Podstata         SK OEL         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         ocentral         io superior         Podstawa         PL NDS         Grunnlag         FOR-2011-12-06-         1358	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor VLE-MP Wartość NDS NDSch Verdi TWA	the technological saf	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga  Nota  Nota
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane NO Komponenter Methylcyclohexane	Is/personal pro         cc control para         Podstata         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         ocentral         io superior         Podstawa         PL NDS         Grunnlag         FOR-2011-12-06- 1358	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor Valor VLE-MP Wartość NDS NDSch Verdi TWA	the technological saf	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga  Nota  Nota
SECTION 8: Exposure control Ingredients with workplar SK Zložky Methylcyclohexane SI Sestavine Methylcyclohexane PT Componentes Methylcyclohexane afeção do SNC afeção do sistema nervoso irritação do irritação do trato respiratór TRS PL Składniki Methylcyclohexane NO Komponenter Methylcyclohexane	Podstata         SK OEL         SK OEL         SK OEL         Osnova         SI OEL         Bases         PT OEL         Ocentral         io superior         Podstawa         PL NDS         Grunnlag         FOR-2011-12-06-1358         Pagrindas, bazé	must comply with tection Hodnota NPEL priemerný NPEL krátkodobý Vrednost MV Valor Valor VLE-MP Wartość NDS NDSch Verdi TWA Verté	the technological saf Kontrolné parametre 200 ppm, 810 mg/m3 400 ppm, 1.620 mg/m3 Parametri nadzora 500 ppm, 2.000 mg/m3 Parâmetros de controlo 400 ppm, Parametry dotyczące kontroli 1.600 mg/m3 3.000 mg/m3 3.000 mg/m3 Kontrollparametrer 200 ppm, 800 mg/m3	ety standards.  Poznámka  Pripomba  Nota  irritação do TRS, afeção do SNC,  Uwaga  Nota  Nota  Pastaba

 Ingredients
 Basis
 Value
 Control parameters
 Note

 Methylcyclohexane
 IE OEL
 OELV - 8 hrs (TWA)
 400 ppm, 1.600 mg/m3
 SDS Number:100000014163
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### SAFETY DATA SHEET

Συστατικά	Βάση	Τιμή	Παράμετροι ελέγχου	Σημείωση
Methylcyclohexane	GR OEL	TWA	500 ppm, 2.000 mg/m3	
	GR OEL	STEL	500 ppm, 2.000 mg/m3	
FR				
Composants	Base	Valeur	Paramètres de	Note
Composanto	Base	Valoan	contrôle	11010
Methylcyclohexane	FR VLE	VME	400 ppm, 1.600 mg/m3	normal.
normal Valeurs limites indicatives			100 pp, 11000	normali,
FI	1	-		1
Aineosat	Peruste	Arvo	Valvontaa koskevat	Huomautus
			muuttujat	
Methylcyclohexane	FIOEL	HTP-arvot 8h	400 ppm, 1.600 mg/m3	
	FIOEL	HTP-arvot 15 min	500 ppm, 2.000 mg/m3	
ES				
Componentes	Base	Valor	Parámetros de control	Nota
Methylcyclohexane	ES VLA	VLA-ED	400 ppm, 1.630 mg/m3	
		1	···· pp····; ····· ··· ··· ··· ··· ··· ·	
EE				
Komponendid, osad	Alused	Väärtus	Kontrolliparameetrid	Märkused
Methylcyclohexane	EE OEL	Piirnorm	400 ppm, 1.600 mg/m3	
	Desta			NI-1-
Komponenter	Basis	Værdi	Kontrolparametre	Note
Methylcyclonexane	DK OEL	GV	200 ppm, 805 mg/m3	
DE				
Inhaltsstoffe	Grundlage	Wert	Zu überwachende	Bemerkung
	er an alage		Parameter	Lonionang
Methylcyclohexane	DE TRGS 900	AGW	200 ppm, 810 mg/m3	DFG,
DFG Senatskommission zur Prüf	ung gesundheitsschäd	licher Arbeitsstoffe der D	FG (MAK-Kommission)	,
	00			
CZ				
Složky	Základ	Hodnota	Kontrolní parametry	Poznámka
Methylcyclohexane	CZ OEL	PEL	1.500 mg/m3	l,
	CZ OEL	NPK-P	2.000 mg/m3	Ι,
I drazdi sliznice (oci, dychaci	cesty) resp. kuzi			
СН				
Inhaltsstoffe	Grundlage	Wert	Zu überwachende	Bemerkung
			Parameter	
		MAK-Wert	400 ppm, 1.600 mg/m3	NIOSH, INRS,
Methylcyclohexane	CH SUVA		800 ppm, 3.200 mg/m3	NIOSH, INRS,
Methylcyclohexane	CH SUVA CH SUVA	KZGW		
Methylcyclohexane INRS Institut National de Recherc	CH SUVA CH SUVA he et de Sécurité pour	AZGW la prévention des accide	ents du travail et des maladies p	rofessionnelles
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea	KZGW la prévention des accide lth	ents du travail et des maladies p	rofessionnelles
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea	KZGW la prévention des accide lth	ents du travail et des maladies p	rofessionnelles
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea	KZGW la prévention des accide lth	ents du travail et des maladies p	Opmerking
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis	KZGW la prévention des accide lth Waarde	Controleparameters	ofessionnelles Opmerking
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL	KZGW la prévention des accide lth Waarde TGG 8 hr	Controleparameters 400 ppm, 1.633 mg/m3	rofessionnelles Opmerking
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL	KZGW la prévention des accide lth Waarde TGG 8 hr	Controleparameters 400 ppm, 1.633 mg/m3	ofessionnelles Opmerking
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT Inhaltsstoffe	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL Grundlage	KZGW la prévention des accide lth Waarde TGG 8 hr	Controleparameters 400 ppm, 1.633 mg/m3 Zu überwachende	Opmerking Bemerkung
Methylcyclohexane INRS Institut National de Recherce NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT Inhaltsstoffe	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL Grundlage	KZGW la prévention des accide lth   Waarde   TGG 8 hr   Wert	Controleparameters 400 ppm, 1.633 mg/m3 Zu überwachende Parameter	Opmerking Bemerkung
Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT Inhaltsstoffe Methylcyclohexane	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL Grundlage AT OEL	KZGW la prévention des accide Ith Waarde TGG 8 hr Wert TRK-TMW	Controleparameters 400 ppm, 1.633 mg/m3 Zu überwachende Parameter 400 ppm, 1.600 mg/m3	Opmerking Bemerkung
Methylcyclohexane INRS Institut National de Recherco NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT Inhaltsstoffe Methylcyclohexane	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL Grundlage AT OEL AT OEL	KZGW la prévention des accide Ith Waarde TGG 8 hr Wert TRK-TMW TRK-KZW	Controleparameters 400 ppm, 1.633 mg/m3 Zu überwachende Parameter 400 ppm, 1.600 mg/m3 1.600 ppm, 6.400 mg/m3	Opmerking Bemerkung
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Methylcyclohexane INRS Institut National de Recherc NIOSH National Institute for Occupa BE Bestanddelen Methylcyclohexane AT Inhaltsstoffe Methylcyclohexane DNEL DNEL DNEL SDS Number:100000014163	CH SUVA CH SUVA he et de Sécurité pour ational Safety and Hea Basis BE OEL Grundlage AT OEL AT OEL : End Use Routes of Potentia Value: 1 : End Use Routes of Potentia Value: 1 : End Use	KZGW         Ia prévention des accide         Ith         Waarde         TGG 8 hr         Wert         TRK-TMW         TRK-KZW         Standard         Workers         of exposure: Inhal         health effects: S         64,3 mg/m3         e: Workers         of exposure: Inhal         I health effects: A         354,6 mg/m3         e: Workers         of exposure: Skin	Controleparameters 400 ppm, 1.633 mg/m3 Zu überwachende Parameter 400 ppm, 1.600 mg/m3 1.600 ppm, 6.400 mg/m3 1.600 ppm, 6.400 mg/m3 dation ystemic effects ation cute effects contact	Opmerking Bemerkung

			SAFETY DATA SHEET
Methylcyclohexane			
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		Potential health effects: Systemic effects Value: 1,7 mg/kg	5
PNEC	:	Fresh water Value: 0,00326 mg/l	
PNEC	:	Marine water Value: 0,000326 mg/l	
PNEC	:	Fresh water sediment Value: 0,088 mg/kg	
PNEC	:	Marine sediment Value: 0,0088 mg/kg	
PNEC	:	Soil Value: 0,127 mg/kg	
Engineering measures			

Adequate ventilation to control airborned concentrations below the exposure guidelines/limits. 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 retardant protective clothing. Footwear protecting against chemicals.
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Mothyleyelohoxana	SAFETY DATA SHEET
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Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
SECTION 9: Physical and chem	ical properties
Information on basic physi	cal and chemical properties
Appearance	
Form Physical state Color Odor	: Liquid : Liquid : Colorless : Mild
Safety data	
Flash point	: -5,5 °C (22,1 °F) Method: Tagliabue Open Cup
Lower explosion limit	: 1,2 %(V)
Upper explosion limit	: 6,7 %(V)
Oxidizing properties	: no
Autoignition temperature	: 285 °C (545 °F)
Molecular formula	: C7H14
Molecular weight	: 98,21 g/mol
рН	: No data available
Freezing point	: -127 °C (-197 °F)
Boiling point/boiling range	: 100,4 °C (212,7 °F)
Vapor pressure	: 1,60 PSI at 37,8 °C (100,0 °F)
Relative density	: 0,774 at 15,6 °C (60,1 °F)
Density	: 771,7 g/l
Water solubility	: Negligible
Viscosity, dynamic	: 0,732 cP
Relative vapor density	: 3 (Air = 1.0)
Evaporation rate	: 1
Percent volatile	: > 99 %
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<b>SECTION 10: Stability and react</b>	ivity	
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.	
Possibility of hazardous rea	ctions	
Conditions to avoid	: Heat, flames and sparks.	
Materials to avoid	May react with oxygen and strong oxidizing agents, such as	
Hazardous decomposition products	: Hydrocarbons Carbon oxides	
Other data	: No decomposition if stored and applied as directed.	
SECTION 11: Toxicological info	rmation	
Acute oral toxicity		
Methylcyclohexane	: LD50: 4.000 - 4.500 mg/kg Species: Rabbit	
Acute inhalation toxicity		
Methylcyclohexane	: LC50: 41 mg/l Exposure time: 2 h Species: Mouse Test atmosphere: vapor	
Skin irritation		
Methylcyclohexane	: Skin irritation	
<b>Eye irritation</b> Methylcyclohexane	: No eye irritation	
Sensitization		
Methylcyclohexane	: Did not cause sensitization on laboratory animals.	
Repeated dose toxicity		
Methylcyclohexane	: Species: Rat, male Sex: male Application Route: oral gavage Dose: 62.5, 250, 1000 mg/kg Exposure time: 28 d Number of exposures: daily, 7d/wk NOEL: 250 mg/kg	
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Methylcyclobeyane	SAFETY DATA SHEET
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	Lowest observable effect level: 1.000 mg/kg Method: OECD Guideline 422
	Species: Rat, female Sex: female Application Route: oral gavage Dose: 62.5, 250, 1000 mg/kg Exposure time: 46 d Number of exposures: daily, 7 d/wk NOEL: 250 mg/kg Lowest observable effect level: 1.000 mg/kg Method: OECD Guideline 422
Reproductive toxicity	
Methylcyclohexane	<ul> <li>Species: Rat Sex: male</li> <li>Application Route: oral gavage</li> <li>Dose: 62.5, 250, 1000 mg/kg</li> <li>Number of exposures: daily, 7 d/wk</li> <li>Test period: 28</li> <li>Method: OECD Guideline 422</li> <li>NOAEL Parent: 1.000 mg/kg</li> <li>NOAEL F1: 1.000 mg/kg</li> <li>Species: Rat</li> <li>Sex: female</li> <li>Application Route: oral gavage</li> <li>Dose: 62.5, 250, 1000 mg/kg</li> <li>Number of exposures: daily, 7 d/wk</li> <li>Test period: 46</li> <li>Method: OECD Guideline 422</li> <li>NOAEL F1: 1.000 mg/kg</li> <li>Number of exposures: daily, 7 d/wk</li> <li>Test period: 46</li> <li>Method: OECD Guideline 422</li> <li>NOAEL Parent: 1.000 mg/kg</li> <li>NOAEL F1: 1.000 mg/kg</li> <li>NOAEL F1: 1.000 mg/kg</li> <li>Species: Rat</li> <li>Sex: male and female</li> <li>Application Route: inhalation (vapor)</li> <li>Dose: 500, 2000, 7000 ppm</li> <li>Number of exposures: daily, 7 d/wk</li> <li>Test period: 28</li> <li>Method: OECD Test Guideline 416</li> </ul>
	NOAEL Parent: 500 ppm NOAEL F1: 500 ppm NOAEL F2: 2000 ppm Information given is based on data obtained from similar substances.
Developmental Toxicity	
Methylcyclohexane	<ul> <li>Species: Rat Application Route: Inhalation Dose: 500, 2000, 7000 ppm Number of exposures: 6 hr/d, 7 d/wk Test period: GD 7 - 16 Method: OECD Guideline 414 NOAEL Teratogenicity: 7000 ppm NOAEL Maternal: 500 ppm Information given is based on data obtained from similar</li> </ul>
SDS Number:100000014163	10/56

Mathylayalahayana	SAFETY DATA SHEET
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	Substances. Species: Rabbit Application Route: Inhalation Dose: 500, 2000, 7000 ppm Number of exposures: 6 hr/d, 7 d/wk Test period: GD 6 - 18 Method: OECD Guideline 414 NOAEL Teratogenicity: 7000 ppm NOAEL Maternal: 500 ppm Information given is based on data obtained from similar substances.
Methylcyclohexane Aspiration toxicity	May be fatal if swallowed and enters airways.
CMR effects	
Methylcyclohexane	<ul> <li>Carcinogenicity: Not available Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Teratogenicity: Animal testing did not show any effects on fetal development. Reproductive toxicity: Animal testing did not show any effects on fertility.</li> </ul>
Methylcyclohexane Further information	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.
SECTION 12: Ecological information	n
Toxicity to fish	
Methylcyclohexane	: LC50: 2,07 mg/l Exposure time: 96 h Species: Fish semi-static test
Toxicity to daphnia and other a	aquatic invertebrates
Methylcyclohexane	EC50: 0,326 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) semi-static test
Toxicity to algae	
Methylcyclohexane	EC50: 0,134 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) static test
M-Factor	M-Eactor (Acute Aquat Tax) 1
methyloyolonexane :	W-raciol (Acute Aqual. 10X.)
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Methylcyclobeyane	SAFETY DATA SHEET
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	M-Factor (Chron. Aquat. Tox.) 1
Toxicity to bacteria	
Methylcyclohexane	: IC50: 29 mg/l Exposure time: 15 h Growth inhibition
Bioaccumulation	
Methylcyclohexane	: Not classified due to data which are conclusive although insufficient for classification.
Biodegradability	
Methylcyclohexane	: aerobic 0 % Testing period: 28 d Method: OECD Test Guideline 301D
Ecotoxicology Assessmen	ıt
Acute aquatic toxicity Methylcyclohexane	: Very toxic to aquatic life.
Chronic aquatic toxicity Methylcyclohexane	: Very toxic to aquatic life with long lasting effects.
Results of PBT assessment Methylcyclohexane	: Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	: Toxic to aquatic life with long lasting effects.
SECTION 13: Disposal conside	rations
The information in this SDS	pertains only to the product as shipped.
Use material for its intended may meet the criteria of a ha other State and local regulat regulated components may classified as a hazardous wa disposal facility.	purpose or recycle if possible. This material, if it must be discarded, izardous waste as defined by US EPA under RCRA (40 CFR 261) or ions. Measurement of certain physical properties and analysis for be necessary to make a correct determination. If this material is aste, federal law requires disposal at a licensed hazardous waste
Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting
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torch on, the empty drum.

### **SECTION 14: Transport information**

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)	
UN2296, METHYLCYCLOHEXANE, 3, II, MARINE POLLUTANT, (METHYLCYCLOHEXAN	٧E)

### IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS) UN2296, METHYLCYCLOHEXANE, 3, II, (-5,5 °C), MARINE POLLUTANT, (METHYLCYCLOHEXANE)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION) UN2296, METHYLCYCLOHEXANE, 3, II

### ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE)) UN2296, METHYLCYCLOHEXANE, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (METHYLCYCLOHEXANE)

## RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

UN2296, METHYLCYCLOHEXANE, 3, II, ENVIRONMENTALLY HAZARDOUS, (METHYLCYCLOHEXANE)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN2296, METHYLCYCLOHEXANE, 3, II, ENVIRONMENTALLY HAZARDOUS, (METHYLCYCLOHEXANE)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

methylcyclohexane

Other information

: Methylcyclohexane, S.T. 2, Cat. Y

**SECTION 15: Regulatory information** 

National legislation

**Chemical Safety Assessment** 

Ingredients

SDS Number:100000014163

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203-624-3

rsion 1.7	Revision Date 2017-12-
Major Accident Hazard Legislation	<ul> <li>96/82/EC Update: 2003 Dangerous for the environment 9b Quantity 1: 200 t Quantity 2: 500 t</li> <li>96/82/EC Update: 2003 Highly flammable 7b Quantity 1: 5.000 t Quantity 2: 50.000 t</li> </ul>
Water contaminating class (Germany)	: WGK 2 water endangering
Notification status Europe REACH United States of America (USA) TSCA Canada DSL Australia AICS New Zealand NZIoC Japan ENCS Korea KECI Philippines PICCS China IECSC	<ul> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> <li>On the inventory, or in compliance with the inventory</li> </ul>
CTION 16: Other information	
NFPA Classification :	Health Hazard: 2 Fire Hazard: 3 Reactivity Hazard: 0
Further information	
Legacy SDS Number :	34310
	st version are highlighted in the margin. This version replaces all
Significant changes since the las previous versions.	st version are highlighted in the margin. This version replaces an
Significant changes since the las previous versions. The information in this SDS perts	ains only to the product as shipped.
Significant changes since the las previous versions. The information in this SDS pert The information provided in this information and belief at the date guidance for safe handling, use, not to be considered a warranty specific material designated and other materials or in any process	ains only to the product as shipped. Safety Data Sheet is correct to the best of our knowledge, of its publication. The information given is designed only as a processing, storage, transportation, disposal and release and is or quality specification. The information relates only to the may not be valid for such material used in combination with any s, unless specified in the text.
Significant changes since the las previous versions. The information in this SDS pert The information provided in this information and belief at the date guidance for safe handling, use, not to be considered a warranty specific material designated and other materials or in any process Key or legend to abt	ains only to the product as shipped. Safety Data Sheet is correct to the best of our knowledge, of its publication. The information given is designed only as a processing, storage, transportation, disposal and release and is or quality specification. The information relates only to the may not be valid for such material used in combination with any s, unless specified in the text.

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ACGIH	American Conference of	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational 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 Concentration
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 Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery 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 New Chemical Substances	TSCA	Toxic Substance Control Act
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.

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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1. Short title of Exposure Scenario: So	Ivent in other applications
1. Short title of Exposure Scenario: <b>So</b> Main User Groups Sector of use Process category	<ul> <li>SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites</li> <li>SU3: Industrial Manufacturing (all)</li> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure</li> <li>PROC3: Use in closed batch process (synthesis or formulation)</li> <li>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</li> <li>PROC7: Industrial spraying</li> <li>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</li> <li>PROC10: Roller application or brushing</li> <li>PROC13: Treatment of articles by dipping and pouring</li> </ul>
Environmental release category	: <b>ERC4:</b> Industrial use of processing aids in processes and products, not becoming part of articles
processing aids in processes an Environment factors not influenced Flow rate Other given operational conditions a	d products, not becoming part of articles by risk management : 90.000 m3/d affecting environmental exposure
Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Soil Local release rate: Air Local release rate: Water Local release rate: Soil	: 0,3 % : 0,003 % : 0,1 % : 0,66 kg/day : 0,0065 kg/day : 40 kg/day
Technical conditions and measures Air Water	<ul> <li>/ Organizational measures</li> <li>: Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 70 %)</li> <li>: Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: &gt; 96,4 %)</li> </ul>
Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment plant effluent Sludge Treatment	<ul> <li>municipal sewage treatment plant</li> <li>Municipal sewage treatment plant, No</li> <li>2.000 m3/d</li> <li>Agricultural soil, No</li> </ul>
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2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure			
Product characteristics	· Liquid substance		
Physical Form (at time of use)			
Frequency and duration of use			
Exposure duration			
Frequency of use	: 5 days/week		
Human factors not influenced by ris Exposed skin area	k management : One hand face only (240 cm2)		
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor		
<b>Technical conditions and measures</b> Local exhaust ventilation, No			
<b>Conditions and measures related to</b> Personal Protection, None required Respiratory Protection, None required	personal protection, hygiene and health evaluation		
2.2 Contributing scenario contro continuous process with occasio	lling worker exposure for: PROC2: Use in closed, onal controlled exposure		
Product characteristics Physical Form (at time of use)	: Liquid substance		
Frequency and duration of use			
Exposure duration	: >4 h		
Frequency of use	: 5 days/week		
Human factors not influenced by risk management Exposed skin area : Palms of both hands (480 cm2)			
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor		
<b>Technical conditions and measures</b> Local exhaust ventilation, No			
<b>Conditions and measures related to</b> Protective gloves (Effectiveness: 90 ° Respiratory Protection, None required	personal protection, hygiene and health evaluation %) d		
2.2 Contributing scenario contro process (synthesis or formulatio	Iling worker exposure for: PROC3: Use in closed batch on)		
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance		
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Frequency and duration of useExposure duration: > 4 hFrequency of use: 5 days/week		
Human factors not influenced by risk management Exposed skin area : One hand face only (240 c	m2)	
Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor		
<b>Technical conditions and measures</b> Local exhaust ventilation, No		
Conditions and measures related to personal protection, hygiene Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required	e and health evaluation	
2.2 Contributing scenario controlling worker exposure for: other process (synthesis) where opportunity for exposure	PROC4: Use in batch and arises	
Product characteristics Physical Form (at time of use) : Liquid substance		
Frequency and duration of useExposure duration: > 4 hFrequency of use: 5 days/week		
Human factors not influenced by risk managementExposed skin area: Palms of both hands (480	cm2)	
Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor		
<b>Technical conditions and measures</b> Local exhaust ventilation- inhalation:, Yes (Effectiveness: 90 %)		
Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required		
2.2 Contributing scenario controlling worker exposure for:	PROC7: Industrial spraying	
Product characteristics Physical Form (at time of use) : Liquid substance		
Frequency and duration of useExposure duration: > 4 hFrequency of use: 5 days/week		
Human factors not influenced by risk management : 1500 cm2		
Other operational conditions affecting workers exposure		
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Outdoor / Indoor	: Indoor
Technical conditions and measure Local exhaust ventilation-dermal:, N	es Yes (Effectiveness: 95 %)
<b>Conditions and measures related</b> Protective gloves, APF 10 (Effective Respiratory Protection, None require	to personal protection, hygiene and health evaluation eness: 90 %) red
2.2 Contributing scenario contr substance or preparation (char non-dedicated facilities	rolling worker exposure for: PROC8a: Transfer of rging/discharging) from/to vessels/large containers at
Product characteristics	
Physical Form (at time of use)	: Liquid substance
Frequency and duration of use	
Exposure duration	: >4 h
Frequency of use	: 5 days/week
Human factors not influenced by r Exposed skin area	isk management : Two hands (960 cm2)
Other operational conditions affec	ting workers exposure
Outdoor / Indoor	: Indoor
Technical conditions and measure Local exhaust ventilation- inhalation	es n:, Yes (Effectiveness: 90 %)
Conditions and measures related to Protective gloves, APF 10 (Effective Respiratory Protection, None require	to personal protection, hygiene and health evaluation eness: 90 %) red
2.2 Contributing scenario contr substance or preparation (char dedicated facilities	rolling worker exposure for: PROC8b: Transfer of ging/ discharging) from/ to vessels/ large containers at
Product characteristics	
Physical Form (at time of use)	: Liquid substance
Frequency and duration of use	
Exposure duration	: >4 h
Frequency of use	: 5 days/week
Human factors not influenced by r Exposed skin area	isk management : Two hands (960 cm2)
Other operational conditions affec Outdoor / Indoor	ting workers exposure : Indoor
Technical conditions and measure Local exhaust ventilation- inhalation	es n:, Yes (Effectiveness: 95 %)
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### Methylcyclohexane Version 1.7 Revision Date 2017-12-18 Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required 2.2 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : 1-4h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Two hands (960 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor **Technical conditions and measures** Local exhaust ventilation- inhalation:, Yes (Effectiveness: 90 %) Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required 2.2 Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : >4h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Palms of both hands (480 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation- inhalation:, Yes (Effectiveness: 90 %) Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required 3. Exposure estimation and reference to its source SDS Number:100000014163 20/56

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### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio
ERC4	Petrorisk		Freshwater		0,00018 mg/L	
			Freshwater sediment		0,0043 mg/kg dry weight (d.w.)	
			Marine water		0,000018 mg/L	
			Marine sediment		0,00043 mg/kg dry weight (d.w.)	
			Sewage treatment plant		0,0018 mg/L	
			Agricultural soil		0,0000012 mg/kg	

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

### Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC1	EasyTRA		Worker - dermal, long-	0,020571 mg/kg/d	
			term – systemic	0.004547	
			Worker – inhalation,	0,024547 mg/m3	
			Worker – long-term –	0.024078 ma/ka/d	
			systemic Combined	0,024070 mg/kg/u	
			routes		
PROC2	EasyTRA		Worker – dermal, long-	0,082286 mg/kg/d	
			term – systemic		
			Worker – inhalation,	12,273 mg/m3	
			long-term – systemic		
			Worker – long-term –	1,836 mg/kg/d	
			systemic Combined		
PROC3	FasyTRA		Worker – dermal long-	0 041143 ma/ka/d	
111000	Labymar		term – systemic	o,o i i i io ing/itg/u	
			Worker – inhalation,	24,547 mg/m3	
			long-term – systemic		
			Worker – long-term –	3,548 mg/kg/d	
			systemic Combined		
DDOC4				0.411420 malkald	
PROC4	EasyTRA		term – systemic	0,411429 mg/kg/d	
			Worker – inhalation	4 909 mg/m3	
			long-term – systemic	4,000 mg/mo	
			Worker – long-term –	1,113 mg/kg/d	
			systemic Combined		
			routes		
PROC7	EasyTRA		Worker – dermal, long-	0,128571 mg/kg/d	
			term – systemic	20,000	
			VVORKER – Innalation,	30,683 mg/m3	
			Worker – long-term –	4 512 ma/ka/d	
			systemic Combined	1,012 mg/kg/a	
			routes		
PROC8a	EasyTRA		Worker – dermal, long-	0,822857 mg/kg/d	
			term – systemic		
			Worker – inhalation,	12,273 mg/m3	
			long-term – systemic	0 E76 malka/d	
			systemic Combined	∠,576 mg/kg/d	
			routes		
PROC8b	EasyTRA		Worker - dermal, long-	0,822857 mg/kg/d	
	-		term – systemic		
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		Worker – inhalation, 3,068 mg/m3
		Worker – long-term – 1,261 mg/kg/d systemic Combined routes
PROC10	EasyTRA	Worker – dermal, long- term – systemic 0,987429 mg/kg/d
		Worker – inhalation, 7,364 mg/m3 long-term – systemic
		Worker – long-term – 2,039 mg/kg/d systemic Combined routes
PROC13	EasyTRA	Worker – dermal, long- term – systemic 0,822857 mg/kg/d
		Worker – inhalation, 12,273 mg/m3 long-term – systemic
		Worker – long-term – 2,576 mg/kg/d systemic Combined routes

PROC1: Use in closed process, no likelihood of exposure

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC7: Industrial spraying

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC10: Roller application or brushing

PROC13: Treatment of articles by dipping and pouring

### 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 1. Short title of Exposure Scenario: **Use in polymer processing – professional**

Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: SU 22, SU0: Professional uses: Public domain
	(administration, education, entertainment, services, craftsmen), Other
Process category	<ul> <li>PROC1: Use in closed process, no likelihood of exposure</li> <li>PROC2: Use in closed, continuous process with occasional</li> </ul>
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Version 1.7       Revision Date 2017-12-18         Version 1.7       controlled exposure PROC6: Calendering operations PROC6: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC14: Production of mixtures or articles by tabletting, compression.extrusion, pelletization; Industrial setting; PROC21: Low energy manipulation of substances bound in materials and/ or articles         Environmental release category       : ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems. Wide dispersive induor use of processing aids in open systems. Wide dispersive outdoor use of processing aids in open systems.         Further information       ::         Processing aids in open systems.         Further information       ::         Processing aids in open systems.         Processing aids in open systems.         Environment factors not influenced by risk management Flow rate         Flow rate       : 90.000 m3/d         Other given operational conditions affecting environmental exposure of processing aids in open systems.         Envision or Release Factor: Nater       : 1 & g/day : 1 & g/day : 2 & 0000 m3/d         Ducat release rate: Water       : 1 & g/day : 2 & 0000 m3/d         Ducat release rate: Water       : 1 & g/day : 2 & 0000 m3/d         Ducat release rate: Water       : 1 & g/day : 2 & 0000 m3/d         Ducat release rate: Water       : 1 & g/day : 2 & 0000 m3/d         Ducat release rat	Mathylcyclobayana	SAFETY DATA SHEET
version 1.7       revision Date 2017-12-16         controlled exposure PROC6: Calendaring operations (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities PROC1: Production of mixtures or articles by tabletting, compression, extrusion, pelletization; industrial setting; PROC1: Low energy manipulation of substances bound in materials and/ or articles         Environmental release category       : ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems. Wide dispersive outdoor use of processing aids in open systems         Further information       : : : : : : : : : : : : : : : : : : :		Devision Data 0017 40 40
<ul> <li>controlled exposure</li> <li>PROC6: Calendering operations</li> <li>PROC6: Calendering operations</li> <li>PROC6: Calendering operations</li> <li>PROC8: Transfer of substance or preparation (charging/ discharging) from/ to vesselk/arge containers at dedicated facilities</li> <li>PROC14: Production of mixtures or articles by tableting, compression, extrusion, pelitarization: Industrial setting:</li> <li>PROC21: Low energy manipulation of substances bound in materials and/ or articles</li> <li>Environmental release category</li> <li>ERC6a, ERC84: Wide dispersive indoor use of processing aids in open systems.</li> <li>Further information</li> <li>Environmental release category of the management transfers, moulding and forming activities, material re-works and associated maintenance.</li> <li>Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems.</li> <li>Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems</li> <li>Contributing scenario controlling environmental exposure</li> <li>Environment factors not influenced by risk management Elow rate</li> <li>Environment factors not influenced by risk management</li> <li>Elow rate</li> <li>Environment factors not influenced by risk management</li> <li>Elow rate</li> <li>Environment factors not influenced by risk management</li> <li>Elow rate</li> <li>Environment factors not influenced by risk management</li> <li>Elow rate</li> <li>Environmental exposure</li> <li>Marce</li> <li>Environmental exposure</li> <li>Marce</li> <li>Environmental exposure</li> <li>Marce</li> <li>Environmental exposure</li> <li>Marce</li> <li>Envision or Release Factor: Air<!--</td--><td>Version 1.7</td><td>Revision Date 2017-12-18</td></li></ul>	Version 1.7	Revision Date 2017-12-18
Environmental release category       :       ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems         Further information       :       Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.         2.1 Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems         Environment factors not influenced by risk management       Flow rate       :90.000 m3/d         Other given operational conditions affecting environmental exposure       Emission or Release Factor: Air : 98 %       :98 %         Emission or Release Factor: Water ::       1.6 kg/day       :1.6 kg/day       :2001 release rate: Soil : 1.6 kg/day         Local release rate: Soil ::       1.6 kg/day       :1.6 kg/day       :2001 release rate: Soil : 1.7 reat on the wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): (Effectiveness: 0.%)       Water : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0.%)         Water       :       : Treat one lase wage treatment plant         Type of Sewage Treatment Plant :       : Agricultural soil, Yes, applicable		<ul> <li>controlled exposure</li> <li>PROC6: Calendering operations</li> <li>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</li> <li>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</li> <li>PROC14: Production of mixtures or articles by tabletting, compression, extrusion, pelletization; Industrial setting;</li> <li>PROC21: Low energy manipulation of substances bound in materials and/ or articles</li> </ul>
Further information       :         Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.         2.1 Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems.         Environment factors not influenced by risk management         Flow rate       : 90.000 m3/d         Other given operational conditions affecting environmental exposure         Emission or Release Factor: Air       : 98 %         Emission or Release Factor: Soil       : 1 %         Local release rate: Water       : 1 6k kg/day         Local release rate: Soil       : 0.0033 kg/day         Technical conditions and measures / Organizational measures         Air       : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       : Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: 0 %)         Conditions and measures related to municipal sewage treatment plant, No         Flow rate of sewage treatment plant       : Agricultural soil, Yes, applicable         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure	Environmental release category	: <b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.         2.1 Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems.         Environment factors not influenced by risk management Flow rate       : 90.000 m3/d         Other given operational conditions affecting environmental exposure         Emission or Release Factor: Air       : 98 %         Emission or Release Factor: Soil       : 1 %         Emission or Release Factor: Soil       : 1 %         Local release rate: Water       : 1.6 kg/day         Local release rate: Soil       : 0,0033 kg/day         Technical conditions and measures / Organizational measures         Air       : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: > 0.4 %)         Conditions and measures related to municipal sewage treatment plant. Type of Sewage Treatment Plant       : Municipal sewage treatment plant, No         Flow rate       : Agricultural soil, Yes, applicable       : 2.200 m3/d         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure       : 23/56	Further information	:
2.1 Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems         Environment factors not influenced by risk management Flow rate       90.000 m3/d         Other given operational conditions affecting environmental exposure         Emission or Release Factor: Air       98 %         Emission or Release Factor: Soil       1 %         Ediase rate: Water       1.6 kg/day         Local release rate: Water       1.6 kg/day         Local release rate: Soil       0.0003 kg/day         Technical conditions and measures / Organizational measures         Air       Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: > 96,4 %)         Conditions and measures related to municipal sewage treatment plant       Type of Sewage Treatment Plant         Type of Sewage treatment       2.000 m3/d         plant effluent       Sludge Treatment         Sludge Treatment       Agricultural soil, Yes, applicable         22 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure		Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.
2.1 Contributing scenario controlling environmental exposure for:ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems. Wide dispersive outdoor use of processing aids in open systems. Wide dispersive outdoor use of processing aids in open systems.		
Other given operational conditions affecting environmental exposure         Emission or Release Factor: Air       98 %         Emission or Release Factor: Water       1 %         Emission or Release Factor: Water       1 %         Emission or Release Factor: Water       1 %         Emission or Release Factor: Soil       1 %         Local release rate: Water       1,6 kg/day         Local release rate: Soil       0,0033 kg/day         Technical conditions and measures / Organizational measures         Air       Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: > 96,4 %)         Conditions and measures related to municipal sewage treatment plant         Type of Sewage Treatment Plant       Municipal sewage treatment plant, No         Flow rate of sewage treatment       2.000 m3/d         glant effluent       Agricultural soil, Yes, applicable         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure         SDS Number:10000014163       23/56	Environment factors not influenced Flow rate	by risk management : 90.000 m3/d
Emission or Release Factor: Air       :       98 %         Emission or Release Factor: Water       :       1 %         Local release rate: Water       :       1 %         Local release rate: Water       :       1.6 kg/day         Local release rate: Soil       :       0,0033 kg/day         Technical conditions and measures / Organizational measures         Air       :       Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       :       :       Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Conditions and measures related to municipal sewage treatment plant       :       (Effectiveness: > 96,4 %)         Conditions and measures related to municipal sewage treatment plant.       :       2.000 m3/d         Plant effluent       :       :       Agricultural soil, Yes, applicable         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure       :       23/56	Other given operational conditions a	affecting environmental exposure
Technical conditions and measures / Organizational measures         Air       : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       : Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: > 96,4 %)         Conditions and measures related to municipal sewage treatment plant       : Municipal sewage treatment plant         Type of Sewage Treatment Plant       : Municipal sewage treatment plant, No         Flow rate of sewage treatment       : 2.000 m3/d         plant effluent       : Agricultural soil, Yes, applicable         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure         SDS Number:100000014163       23/56	Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Soil Local release rate: Water Local release rate: Air Local release rate: Soil	: 98 % : 1 % : 1 % : 1,6 kg/day : 160 kg/day : 0,0033 kg/day
Air       : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)         Water       : Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: > 96,4 %)         Conditions and measures related to municipal sewage treatment plant       : Municipal sewage treatment plant         Type of Sewage Treatment Plant       : Municipal sewage treatment plant, No         Flow rate of sewage treatment       : 2.000 m3/d         plant effluent       : Agricultural soil, Yes, applicable         Sludge Treatment       : Agricultural soil, Yes, applicable         SDS Number:100000014163       23/56	Technical conditions and measures	/ Organizational moasures
Conditions and measures related to municipal sewage treatment plant         Type of Sewage Treatment Plant       : Municipal sewage treatment plant, No         Flow rate of sewage treatment       : 2.000 m3/d         plant effluent       : Agricultural soil, Yes, applicable         Sludge Treatment       : Agricultural soil, Yes, applicable         SDS Number:100000014163       23/56	Air Water	<ul> <li>Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)</li> <li>Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: &gt; 96,4 %)</li> </ul>
Sludge Treatment       : Agricultural soil, Yes, applicable         2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure         SDS Number:100000014163       23/56	Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment	<ul> <li>municipal sewage treatment plant</li> <li>Municipal sewage treatment plant, No</li> <li>2.000 m3/d</li> </ul>
2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure         SDS Number:100000014163       23/56	Sludge Treatment	: Agricultural soil, Yes, applicable
SDS Number:100000014163 23/56	2.2 Contributing scenario contro process, no likelihood of exposu	lling worker exposure for: PROC1: Use in closed re
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### Methylcyclohexane

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Product characteristics Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : >4h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : One hand face only (240 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Personal Protection, None required Respiratory Protection, None required 2.2 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use : >4h Exposure duration Frequency of use : 5 days/week Human factors not influenced by risk management : Palms of both hands (480 cm2) Exposed skin area Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor **Technical conditions and measures** Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required 2.2 Contributing scenario controlling worker exposure for: PROC6: Calendering operations Product characteristics Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : 1-4h Frequency of use : 5 days/week SDS Number:100000014163 24/56

### Methylcyclohexane Version 1.7 Revision Date 2017-12-18 Human factors not influenced by risk management Exposed skin area : Two hands (960 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %) 2.2 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : >4h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Two hands (960 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, Yes, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %) 2.2 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities Product characteristics Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : >4 h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Two hands (960 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor SDS Number:100000014163 25/56

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<b>Technical conditions and measures</b> Local exhaust ventilation, No	
Conditions and measures related to p Protective gloves, Yes, APF 10 (Effect Respiratory Protection, Yes (Effectiver	Dersonal protection, hygiene and health evaluation viveness: 90 %) ness: 90 %)
2.2 Contributing scenario controll mixtures or articles by tabletting, setting;	ing worker exposure for: PROC14: Production of compression, extrusion, pelletization; Industrial
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration	: >4 h
Frequency of use	: 5 days/week
Human factors not influenced by risk Exposed skin area	management : Palms of both hands (480 cm2)
Other operational conditions affecting Outdoor / Indoor	<b>g workers exposure</b> : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
Conditions and measures related to p Protective gloves, Yes, APF 10 (Effect Respiratory Protection, Yes (Effectiver	personal protection, hygiene and health evaluation viveness: 90 %) ness: 90 %)
2.2 Contributing scenario controll manipulation of substances boun	ing worker exposure for: PROC21: Low energy d in materials and/ or articles
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	management : Skin : 1980 cm2
Other operational conditions affecting Outdoor / Indoor	<b>g workers exposure</b> : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
Conditions and measures related to p Protective gloves, Yes, APF 10 (Effect	personal protection, hygiene and health evaluation viveness: 90 %)
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Respiratory Protection, Yes (Effectiveness: 90 %)

### 3. Exposure estimation and reference to its source

### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio
ERC8a, ERC8d	Petrorisk		Freshwater		0,0000065 mg/L	
			Freshwater sediment		0,000035 mg/kg dry weight (d.w.)	
			Marine water		0,0000001 mg/L	
			Marine sediment		0,0000035 mg/kg dry weight (d.w.)	
			Sewage treatment plant		0,000015 mg/L	
			Agricultural soil		0,00001 mg/kg	

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems

### Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC1	EasyTRA		Worker – dermal, long- term – systemic	0,020571 mg/kg/d	
			Worker – inhalation, long-term – systemic	0,024547 mg/m3	
			Worker – long-term – systemic Combined routes	0,024078 mg/kg/d	
PROC2	EasyTRA		Worker – dermal, long- term – systemic	0,082286 mg/kg/d	
			Worker – inhalation, long-term – systemic	49,093 mg/m3	
			Worker – long-term – systemic Combined routes	7,096 mg/kg/d	
PROC6	EasyTRA		Worker – dermal, long- term – systemic	0,987429 mg/kg/d	
			Worker – inhalation, long-term – systemic	14,728 mg/m3	
			Worker – long-term – systemic Combined routes	3,091 mg/kg/d	
PROC8a	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
			Worker – inhalation, long-term – systemic	24,547 mg/m3	
			Worker – long-term – systemic Combined routes	4,33 mg/kg/d	
PROC8b	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
			Worker – inhalation, long-term – systemic	12,273 mg/m3	
			Worker – long-term – systemic Combined routes	2,576 mg/kg/d	
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PROC14	EasyTRA	Worker – dermal, long- 0,205714 mg/kg/d term – systemic	
		Worker – inhalation, 24,547 mg/m3 long-term – systemic	
		Worker – long-term – 3,712 mg/kg/d systemic Combined routes	
PROC21	EasyTRA	Worker – dermal, long- 0,169714 mg/kg/d term – systemic	
		Worker – inhalation, long-term – systemic	
		Worker – long-term – 0,169714 mg/kg/d systemic Combined routes	

PROC1: Use in closed process, no likelihood of exposure

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC6: Calendering operations

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC14: Production of mixtures or articles by tabletting, compression, extrusion, pelletization; Industrial setting;

PROC21: Low energy manipulation of substances bound in materials and/ or articles

## 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 1. Short title of Exposure Scenario: Use in coatings - professional

Main User Groups Sector of use	<ul> <li>SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</li> <li>SU 22, SU0: Professional uses: Public domain (administration, education, entertainment, services, craftsmen), Other</li> </ul>
Process category	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of mixtures and articles (multistage and/or significant contact)</li> </ul>
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Mothyloyolohoyono	SAFETY DATA SHEET
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	Industrial setting; <b>PROC8a</b> : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b</b> : Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10</b> : Roller application or brushing <b>PROC11</b> : Non industrial spraying <b>PROC13</b> : Treatment of articles by dipping and pouring <b>PROC15</b> : Use as laboratory reagent <b>PROC19</b> : Hand-mixing with intimate contact and only PPE available
Environmental release category :	<b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Further information :	
	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.
2.1 Contributing scenario controlli dispersive indoor use of processin of processing aids in open system	ng environmental exposure for:ERC8a, ERC8d: Wide ng aids in open systems, Wide dispersive outdoor use is
Environment factors not influenced by Flow rate	y risk management : 90.000 m3/d
Other given operational conditions af	fecting environmental exposure
Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Soil Local release rate: Water Local release rate: Air Local release rate: Soil	98 % 1 % 1 % 1,1 kg/day 11 kg/day 0,000002 kg/day
Technical conditions and measures / Air	Organizational measures Treat air emission to provide a typical removal efficiency of
Water	<ul> <li>(%): (Effectiveness: 0 %)</li> <li>Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: &gt; 96,4 %)</li> </ul>
Conditions and measures related to n Type of Sewage Treatment Plant Flow rate of sewage treatment	nunicipal sewage treatment plant Municipal sewage treatment plant, No 2.000 m3/d
Sludge Treatment	: Agricultural soil, Yes, applicable
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2.2 Contributing scenario control process, no likelihood of exposu	ling worker exposure for: PROC1: Use in closed re
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<pre>&lt; management : One hand face only (240 cm2)</pre>
Other operational conditions affectin Outdoor / Indoor	<b>g workers exposure</b> : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Personal Protection, None required Respiratory Protection, None required	personal protection, hygiene and health evaluation
2.2 Contributing scenario control continuous process with occasio	ling worker exposure for: PROC2: Use in closed, nal controlled exposure
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<b>c management</b> : Palms of both hands (480 cm2)
Other operational conditions affectin Outdoor / Indoor	<b>g workers exposure</b> : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectivener Respiratory Protection, None required	personal protection, hygiene and health evaluation ess: 90 %) I
2.2 Contributing scenario control process (synthesis or formulation	ling worker exposure for: PROC3: Use in closed batch n)
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance
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Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week	
Human factors not influenced by ris Exposed skin area	<b>k management</b> : One hand face only (240 cm2)	
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor	
Technical conditions and measures Local exhaust ventilation, No		
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectiver Respiratory Protection, None required	personal protection, hygiene and health ev ness: 90 %) d	valuation
2.2 Contributing scenario contro Use in batch and other process ( Mixing or blending in batch proc (multistage and/or significant co dipping and pouring	Iling worker exposure for: PROC4, PRO (synthesis) where opportunity for expos esses for formulation of mixtures and a ntact) Industrial setting;, Treatment of a	DC5, PROC13: sure arises, articles articles by
Product characteristics Physical Form (at time of use)	: Liquid substance	
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week	
Human factors not influenced by ris Exposed skin area	<b>k management</b> : Palms of both hands (480 cm2)	
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor	
Technical conditions and measures Local exhaust ventilation, No		
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectiver Respiratory Protection, Yes (Effective	personal protection, hygiene and health ev ness: 90 %) eness: 90 %)	valuation
2.2 Contributing scenario contro of substance or preparation (cha non-dedicated facilities, Transfer from/ to vessels/ large containers	Iling worker exposure for: PROC8a, PR arging/discharging) from/to vessels/larg r of substance or preparation (charging s at dedicated facilities	OC8b: Transfer je containers at / discharging)
Product characteristics Physical Form (at time of use)	: Liquid substance	
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week	
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## Methylcyclohexane

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Human factors not influenced by risk Exposed skin area	k management : Two hands (960 cm2)
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
Conditions and measures related to Protective gloves, APF 10 (Effectivener Respiratory Protection, Yes (Effective	personal protection, hygiene and health evaluation ess: 90 %) eness: 90 %)
2.2 Contributing scenario control brushing	ling worker exposure for: PROC10: Roller application or
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use	
Exposure duration Frequency of use	: 1 - 4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	k management : Two hands (960 cm2)
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectivent Respiratory Protection, Yes (Effective	personal protection, hygiene and health evaluation ess: 90 %) mess: 90 %)
2.2 Contributing scenario control spraying	ling worker exposure for: PROC11: Non industrial
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance
Frequency and duration of use	
Frequency of use	: 5 days/week
Human factors not influenced by risk Exposed skin area	k management : Skin
Other operational conditions affectin Outdoor / Indoor	i i sou cm2 ig workers exposure : Indoor
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Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectiven Respiratory Protection, Yes (Effective	personal protection, hygiene and health evaluation ness: 90 %) eness: 95 %)
2.2 Contributing scenario contro reagent	lling worker exposure for: PROC15: Use as laboratory
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by ris Exposed skin area	k management : One hand face only (240 cm2)
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
Conditions and measures related to Protective gloves, APF 10 (Effectiven Respiratory Protection, Yes (Effective	<b>personal protection, hygiene and health evaluation</b> ness: 90 %) eness: 90 %)
2.2 Contributing scenario control intimate contact and only PPE av	lling worker exposure for: PROC19: Hand-mixing with /ailable
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: 15 - 60 min : 5 days/week
Human factors not influenced by ris Exposed skin area	k management : Skin : 1980 cm2
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
Conditions and measures related to Protective gloves, APF 10 (Effectiven Respiratory Protection, Yes (Effective	<b>personal protection, hygiene and health evaluation</b> ness: 90 %) eness: 90 %)
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### 3. Exposure estimation and reference to its source

### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio
ERC8a, ERC8d	Petrorisk		Freshwater		0,000006 mg/L	
			Freshwater sediment		0,000055 mg/kg dry weight (d.w.)	
			Marine water		0,000099 µg/L	
			Marine sediment		0,0000024 mg/kg dry weight (d.w.)	
			Sewage treatment plant		0,0000099 mg/L	
			Agricultural soil		0,0000069 mg/kg	

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems

### Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC1	EasyTRA		Worker – dermal, long- term – systemic	0,020571 mg/kg/d	
			Worker – inhalation, long-term – systemic	0,024547 mg/m3	
			Worker – long-term – systemic Combined routes	0,024078 mg/kg/d	
PROC2	EasyTRA		Worker – dermal, long- term – systemic	0,082286 mg/kg/d	
			Worker – inhalation, long-term – systemic	49,093 mg/m3	
			Worker – long-term – systemic Combined routes	7,096 mg/kg/d	
PROC3	EasyTRA		Worker – dermal, long- term – systemic	0,041143 mg/kg/d	
			Worker – inhalation, long-term – systemic	61,366 mg/m3	
			Worker – long-term – systemic Combined routes	8,808 mg/kg/d	
PROC4	EasyTRA		Worker – dermal, long- term – systemic	0,411429 mg/kg/d	
			Worker – inhalation, long-term – systemic	12,273 mg/m3	
			Worker – long-term – systemic Combined routes	2,165 mg/kg/d	
PROC5	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
			Worker – inhalation, long-term – systemic	14,728 mg/m3	
			Worker – long-term – systemic Combined routes	2,598 mg/kg	
PROC13	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
SDS Number:1	00000014163		34/5	56	

#### Version 1.7 Revision Date 2017-12-18 Worker - inhalation, 24,547 mg/m3 long-term – systemic Worker - long-term -4,33 mg/kg systemic Combined routes PROC8a EasyTRA Worker - dermal, long-0,822857 mg/kg/d term – systemic Worker - inhalation, 24,547 mg/m3 long-term - systemic Worker - long-term -4,33 mg/kg/d systemic Combined routes Worker - dermal, long-PROC8b EasyTRA 0,822857 mg/kg/d term – systemic Worker - inhalation, 12,273 mg/m3 long-term - systemic Worker - long-term -2,576 mg/kg/d systemic Combined routes Worker - dermal, long-PROC10 EasyTRA 0,987429 mg/kg/d term – systemic Worker - inhalation, 14,728 mg/m3 long-term - systemic Worker - long-term -3,091 mg/kg/d systemic Combined routes PROC11 EasyTRA Worker - dermal, long-1,286 mg/kg/d term – systemic Worker - inhalation, 12,273 mg/m3 long-term - systemic Worker - long-term -3,039 mg/kg/d systemic Combined routes PROC15 EasyTRA Worker - dermal, long-0,020571 mg/kg/d term – systemic Worker - inhalation, 2,455 mg/m3 long-term – systemic Worker – long-term – 0,371236 mg/kg/d systemic Combined routes PROC19 Worker – dermal, long-EasyTRA 0,565714 mg/kg/d term – systemic Worker - inhalation, 1,636 mg/m3 long-term - systemic Worker – long-term – 0,799491 mg/kg/d systemic Combined

PROC1: Use in closed process, no likelihood of exposure

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5: Mixing or blending in batch processes for formulation of mixtures and articles (multistage and/or significant contact) Industrial setting;

routes

PROC13: Treatment of articles by dipping and pouring

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC10: Roller application or brushing

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PROC11: Non industrial spraying

PROC15: Use as laboratory reagent

PROC19: Hand-mixing with intimate contact and only PPE available

### 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 1. Short title of Exposure Scenario: Lubricants - Professional

Sector of use       SU 22, SUC: Professional uses: Public domain (administration, education, entertainment, services, craftsmen), Other         Process category       PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed process, no likelihood of exposure PROC3: Use in closed batch process (synthesis or formulation)         PROC3: Use in closed batch process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities         PROC9: Transfer of substance or preparation (charging/ discharging) from/ to vessels/large containers at dedicated facilities         PROC1: Noi industrial spraying         PROC1: Noi industrial spraying         PROC11: Noi industrial spraying         PROC12: Lubrication at high energy conditions PROC13: Treatment of articles by diping and pouring PROC11: Lubrication at high energy conditions and in partly open process         PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems         Environmental release category       ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems         Further information       : Covers the use of formulated lubricants in closed and open         SDS Number:10000014163       : 26/5	Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration,
Process category       PROC1: Use in closed process, no likelihood of exposure         PROC2: Use in closed, continuous process with occasional controlled exposure       PROC3: Use in closed batch process (synthesis or formulation)         PROC3: Use in batch and other process (synthesis) where opportunity for exposure arises       PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises         PROC8: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities       PROC9: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities         PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)       PROC11: Non industrial spraying         PROC11: Lobrication at high energy conditions and in partly open process       PROC13: Greasing at high energy conditions         PROC12: Heat and pressure transfer fluids in dispersive, professional use but closed systems       ProC2: Heat and pressures, Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive outdoor use of substances in closed systems         Further information       :       Covers the use of formulated lubricants in closed and open         SDS Number:10000014163       36/56	Sector of use	<ul> <li>SU 22, SU0: Professional uses: Public domain (administration, education, entertainment, services, craftsmen). Other</li> </ul>
Environmental release category       : ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems         Further information       : Covers the use of formulated lubricants in closed and open         SDS Number:100000014163       36/56	Process category	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process PROC18: Greasing at high energy conditions PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems</li> </ul>
Further information       :         Covers the use of formulated lubricants in closed and open         SDS Number:100000014163       36/56	Environmental release category	: <b>ERC8a, ERC8d, ERC9a, ERC9b:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
SDS Number:100000014163 36/56	Further information	: Covers the use of formulated lubricants in closed and open
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SAFETY DATA SHEET Methylcyclohexane Version 1.7 Revision Date 2017-12-18 systems including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil. 2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems. Wide dispersive outdoor use of substances in closed systems Environment factors not influenced by risk management Flow rate : 90.000 m3/d Other given operational conditions affecting environmental exposure Emission or Release Factor: Air : 40 % Emission or Release Factor: Water : 5 % Emission or Release Factor: Soil : 5% Local release rate: Water : 5,6 kg/day Local release rate: Air : 44 kg/day : 0,011 kg/day Local release rate: Soil Technical conditions and measures / Organizational measures Air : Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %) Water : Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of  $\geq$  (%): (Effectiveness: > 96,4 %) Conditions and measures related to municipal sewage treatment plant Type of Sewage Treatment Plant : Municipal sewage treatment plant, No Flow rate of sewage treatment : 2.000 m3/d plant effluent Sludge Treatment : Agricultural soil, Yes, applicable 2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use : >4h Exposure duration Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : One hand face only (240 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation, No SDS Number:100000014163 37/56

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Conditions and measures related to None required Respiratory Protection, None required	personal protection, hygiene and health evaluation
2.2 Contributing scenario control continuous process with occasio	ling worker exposure for: PROC2: Use in closed, nal controlled exposure
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration	$\therefore > 4 h$
Human factors not influenced by risk	<pre>c management : Palms of both hands (480 cm2)</pre>
Other operational conditions affectin Outdoor / Indoor	g workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectivene Respiratory Protection, None required	personal protection, hygiene and health evaluation ess: 90 %)
2.2 Contributing scenario control process (synthesis or formulation	ling worker exposure for: PROC3: Use in closed batch າ)
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<b>c management</b> : One hand face only (240 cm2)
Other operational conditions affectin Outdoor / Indoor	<b>g workers exposure</b> : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectivener Respiratory Protection, None required	personal protection, hygiene and health evaluation ess: 90 %)
2.2 Contributing scenario control	ling worker exposure for: PROC4, PROC9, PROC13,
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PROC20: Use in batch and other process (synthesis) where opportunity for exposure arises, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Treatment of articles by dipping and pouring, Heat and pressure transfer fluids in dispersive, professional use but closed systems				
Product characteristics Physical Form (at time of use)	: Liquid substance			
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week			
Human factors not influenced by risl Exposed skin area	<pre>x management : Palms of both hands (480 cm2)</pre>			
Other operational conditions affectin Outdoor / Indoor	<b>ig workers exposure</b> : Indoor			
<b>Technical conditions and measures</b> Local exhaust ventilation, No				
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectiven Respiratory Protection, Yes (Effective	<b>personal protection, hygiene and health evaluation</b> ess: 90 %) ness: 90 %)			
2.2 Contributing scenario control of substance or preparation (char non-dedicated facilities, Transfer from/ to vessels/ large containers	ling worker exposure for: PROC8a, PROC8b: Transfer rging/discharging) from/to vessels/large containers at of substance or preparation (charging/ discharging) at dedicated facilities			
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance			
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week			
Human factors not influenced by risl Exposed skin area	<b>c management</b> : Two hands (960 cm2)			
Other operational conditions affectin Outdoor / Indoor	<b>g workers exposure</b> : Indoor			
Technical conditions and measures Local exhaust ventilation, No				
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectiven Respiratory Protection, Yes (Effective	personal protection, hygiene and health evaluation ess: 90 %) ness: 90 %)			
2.2 Contributing scenario control application or brushing, Greasing	ling worker exposure for: PROC10, PROC18: Roller g at high energy conditions			
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Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: 1 - 4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	management : Two hands (960 cm2)
Other operational conditions affecting Outdoor / Indoor	<b>y workers exposure</b> : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to p</b> Protective gloves, APF 10 (Effectivenes Respiratory Protection, Yes (Effectiven	ersonal protection, hygiene and health evaluation ss: 90 %) ess: 90 %)
2.2 Contributing scenario controlli	ng worker exposure for: PROC11: Non industrial
spraying	
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: 1 - 4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<b>management</b> : Skin : 1500 cm2
Other operational conditions affecting Outdoor / Indoor	<b>g workers exposure</b> : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
<b>Conditions and measures related to p</b> Protective gloves, APF 10 (Effectivenes Respiratory Protection, Yes (Effectiven	ersonal protection, hygiene and health evaluation ss: 90 %) ess: 95 %)
2.2 Contributing scenario controlli energy conditions and in partly op	ng worker exposure for: PROC17: Lubrication at high en process
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: 1 - 4 h : 5 days/week
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### Human factors not influenced by risk management

Exposed skin area : Two hands (960 cm2)

Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor

### Technical conditions and measures

Local exhaust ventilation, No

### Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %)

Respiratory Protection, Yes (Effectiveness: 95 %)

### 3. Exposure estimation and reference to its source

### Environment

Contributing	Exposure	Specific	Compartment	Value type	Level of	Risk
Scenario	Assessment	conditions			Exposure	characterization
	Method					ratio
ERC8a, ERC8d,	Petrorisk		Freshwater		0,0000049	
ERC9a, ERC9b					mg/L	
			Freshwater		0,00012	
			sediment		mg/kg dry	
					weight (d.w.)	
			Marine water		0,00049 µg/L	
			Marine sediment		0,000012	
					mg/kg dry	
					weight (d.w.)	
			Sewage		0,000049	
			treatment plant		mg/L	
			Agricultural soil		0,000035	
			-		mg/kg	

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems

### Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC1	EasyTRA		Worker – dermal, long- term – systemic	0,020571 mg/kg/d	
			Worker – inhalation, long-term – systemic	0,024547 mg/m3	
			Worker – long-term – systemic Combined routes	0,024078 mg/kg/d	
PROC2	EasyTRA		Worker – dermal, long- term – systemic	0,082286 mg/kg/d	
			Worker – inhalation, long-term – systemic	49,093 mg/m3	
			Worker – long-term – systemic Combined routes	7,096 mg/kg/d	
PROC3	EasyTRA		Worker – dermal, long- term – systemic	0,041143 mg/kg/d	
			Worker – inhalation, long-term – systemic	61,366 mg/m3	
			Worker – long-term –	8,808 mg/kg/d	
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		systemic Combined routes		
PROC4	EasyTRA	Worker – dermal, long- term – systemic	0,411429 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	2,165 mg/kg/d	
PROC9	EasyTRA	Worker – dermal, long- term – systemic	0,411429 mg/kg/d	
		Worker – inhalation, long-term – systemic	24,547 mg/m3	
		Worker – long-term – systemic Combined routes	3,918 mg/kg/d	
PROC13	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	24,547 mg/m3	
		Worker – long-term – systemic Combined routes	4,33 mg/kg/d	
PROC20	EasyTRA	Worker – dermal, long- term – systemic	0,102857 mg/kg/d	
		Worker – inhalation,	4,909 mg/m3	
		Worker – long-term – systemic Combined routes	0,804186 mg/kg/d	
PROC8a	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation,	24,547 mg/m3	
		Worker – long term – systemic Combined	4,33 mg/kg/d	
PROC8b	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	2,576 mg/kg/d	
PROC10	EasyTRA	Worker – dermal, long- term – systemic	0,987429 mg/kg/d	
		Worker – inhalation, long-term – systemic	14,728 mg/m3	
		Worker – long-term – systemic Combined	3,091 mg/kg/d	
PROC18	EasyTRA	Worker – dermal, long- term – systemic	0,493714 mg/kg/d	
		Worker – inhalation, long-term – systemic	29,456 mg/m3	
		Worker – long-term – systemic Combined routes	4,702 mg/kg/d	
PROC11	EasyTRA	Worker – dermal, long- term – systemic	1,286 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	3,039 mg/kg/d	
PROC17	EasyTRA	Worker – dermal, long- term – systemic	0,987429 mg/kg/d	
		Worker – inhalation, long-term – systemic	14,728 mg/m3	
		Worker – long-term – systemic Combined routes	3,091 mg/kg/d	
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PROC1: Use in closed process, no likelihood of exposure

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC13: Treatment of articles by dipping and pouring

PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC10: Roller application or brushing

PROC18: Greasing at high energy conditions

PROC11: Non industrial spraying

PROC17: Lubrication at high energy conditions and in partly open process

## 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 1. Short title of Exposure Scenario: Use as a cleaning agent - professional

Main User Groups Sector of use	<ul> <li>SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</li> <li>SU 22, SU0: Professional uses: Public domain (administration, education, entertainment, services, craftsmen), Other</li> </ul>
Process category	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at</li> </ul>
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	non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10:</b> Roller application or brushing <b>PROC11:</b> Non industrial spraying <b>PROC13:</b> Treatment of articles by dipping and pouring
Environmental release category	: <b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Further information	: Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).
2.1 Contributing scenario control dispersive indoor use of process of processing aids in open syster	ling environmental exposure for:ERC8a, ERC8d: Wide ing aids in open systems, Wide dispersive outdoor use ms
Environment factors not influenced I Flow rate	by risk management : 90.000 m3/d
Other given operational conditions a	ffecting environmental exposure
Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Soil Local release rate: Water Local release rate: Air Local release rate: Soil Remarks	<ul> <li>2 %</li> <li>0,0001 %</li> <li>0 %</li> <li>1,1 kg/day</li> <li>22 kg/day</li> <li>There is no direct exposure to soil.</li> </ul>
Technical conditions and measures	/ Organizational measures
Air Water	<ul> <li>Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)</li> <li>Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: &gt; 96,4 %)</li> </ul>
<b>Conditions and measures related to</b> Type of Sewage Treatment Plant Flow rate of sewage treatment plant effluent Sludge Treatment	municipal sewage treatment plant : Municipal sewage treatment plant, No : 2.000 m3/d : Agricultural soil. Yes, applicable
	G
2.2 Contributing scenario control process, no likelihood of exposu	ling worker exposure for: PROC1: Use in closed re
Product characteristics	
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Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<b>k management</b> : One hand face only (240 cm2)
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Local exhaust ventilation, No	
<b>Conditions and measures related to</b> None required Respiratory Protection, None required	personal protection, hygiene and health evaluation
2.2 Contributing scenario control continuous process with occasio	ling worker exposure for: PROC2: Use in closed, nal controlled exposure
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	<b>k management</b> : Palms of both hands (480 cm2)
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
<b>Conditions and measures related to</b> Protective gloves, APF 10 (Effectivent Respiratory Protection, None required	personal protection, hygiene and health evaluation ess: 90 %) 1
2.2 Contributing scenario control process (synthesis or formulation	ling worker exposure for: PROC3: Use in closed batch n)
Product characteristics Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	k management : One hand face only (240 cm2)
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Other operational conditions affecting Outdoor / Indoor	<b>g workers exposure</b> : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
<b>Conditions and measures related to p</b> Protective gloves, APF 10 (Effectivene Respiratory Protection, None required	personal protection, hygiene and health evaluation ess: 90 %)
2.2 Contributing scenario controll	ing worker exposure for: PROC4. PROC13: Use in
batch and other process (synthes articles by dipping and pouring	is) where opportunity for exposure arises, Treatment of
Broduct characteristics	
Physical Form (at time of use)	: Liquid substance
Frequency and duration of use	
Exposure duration	: >4h
Frequency of use	: 5 days/week
Human factors not influenced by risk Exposed skin area	management : Palms of both hands (480 cm2)
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
<b>Technical conditions and measures</b> Local exhaust ventilation, No	
Conditions and measures related to p Protective gloves, APF 10 (Effectivene Respiratory Protection, Yes (Effectiver	Dersonal protection, hygiene and health evaluation ess: 90 %) ness: 90 %)
2.2 Contributing scenario controll of substance or preparation (char non-dedicated facilities, Transfer from/ to vessels/ large containers	ing worker exposure for: PROC8a, PROC8b: Transfer ging/discharging) from/to vessels/large containers at of substance or preparation (charging/ discharging) at dedicated facilities
<b>Product characteristics</b> Physical Form (at time of use)	: Liquid substance
Frequency and duration of use Exposure duration Frequency of use	: >4 h : 5 days/week
Human factors not influenced by risk Exposed skin area	management : Two hands (960 cm2)
Other operational conditions affecting Outdoor / Indoor	<b>g workers exposure</b> : Indoor
Technical conditions and measures	
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Local exhaust ventilation, No

Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %)			
2.2 Contributing scenario contro	olling worker exposure for: PROC10: Roller application or		
Product characteristics			
Physical Form (at time of use)	: Liquid substance		
Frequency and duration of use			
Exposure duration	· 1-4h		
Frequency of use	5 days/week		
	,		
Human factors not influenced by ris	sk management		
Exposed skin area	: I wo hands (960 cm2)		
Other operational conditions affecti	ing workers exposure		
Outdoor / Indoor	: Indoor		
Technical conditions and measures Local exhaust ventilation, No	5		
Conditions and measures related to Protective gloves, APF 10 (Effective Respiratory Protection, Yes (Effective	o personal protection, hygiene and health evaluation ness: 90 %) reness: 90 %)		
2.2 Contributing scenario contro spraying	olling worker exposure for: PROC11: Non industrial		
Product choracteristics			
Physical Form (at time of use)	· Liquid substance		
Frequency and duration of use			
Exposure duration	: 1 - 4 h		
Frequency of use	: 5 days/week		
Human factors not influenced by ris	sk management		
Exposed skin area	: Skin		
	: 1500 cm2		
	· · · · · · · · · · · · · · · · · · ·		
Outdoor / Indoor	Ing workers exposure		
Technical conditions and measures Local exhaust ventilation, No	3		
Conditions and measures related to	o personal protection, hygiene and health evaluation		
Respiratory Protection, Yes (Effective	reness: 95 %)		

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### 3. Exposure estimation and reference to its source

### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio
ERC8a, ERC8d	Petrorisk		Freshwater		0,000005 mg/L	
			Freshwater		0,000032	
			sediment		mg/kg dry	
					weight (d.w.)	
			Marine water		0,000014 µg/L	
			Marine sediment		0,000056	
					µg/kg dry	
					weight (d.w.)	
			Sewage		0,00099 ng/L	
			treatment plant			
			Agricultural soil		0,00046	
					mg/kg	

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems

### Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC1	EasyTRA		Worker – dermal, long- term – systemic	0,020571 mg/kg/d	
			Worker – inhalation, long-term – systemic	0,024547 mg/m3	
			Worker – long-term – systemic Combined routes	0,024078 mg/kg/d	
PROC2	EasyTRA		Worker – dermal, long- term – systemic	0,082286 mg/kg/d	
			Worker – inhalation, long-term – systemic	49,093 mg/m3	
			Worker – long-term – systemic Combined routes	7,096 mg/kg/d	
PROC3	EasyTRA		Worker – dermal, long- term – systemic	0,041143 mg/kg/d	
			Worker – inhalation, long-term – systemic	61,366 mg/m3	
			Worker – long-term – systemic Combined routes	8,808 mg/kg/d	
PROC4	EasyTRA		Worker – dermal, long- term – systemic	0,411429 mg/kg/d	
			Worker – inhalation, long-term – systemic	12,273 mg/m3	
			Worker – long-term – systemic Combined routes	2,165 mg/kg/d	
PROC13	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
			Worker – inhalation, long-term – systemic	24,547 mg/m3	
			Worker – long-term – systemic Combined routes	4,33 mg/kg/d	
PROC8a	EasyTRA		Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
			Worker – inhalation,	24,547 mg/m3	
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	1	long-term – systemic		
		Worker – long-term – systemic Combined routes	4,33 mg/kg/d	
PROC8b	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	2,576 mg/kg/d	
PROC10	EasyTRA	Worker – dermal, long- term – systemic	0,987429 mg/kg/d	
		Worker – inhalation, long-term – systemic	14,728 mg/m3	
		Worker – long-term – systemic Combined routes	3,091 mg/kg/d	
PROC11	EasyTRA	Worker – dermal, long- term – systemic	1,286 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	3,039 mg/kg/d	
PROC1: Use	e in closed proces	no likelihood of exposure		

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC13: Treatment of articles by dipping and pouring

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC10: Roller application or brushing

PROC11: Non industrial spraying

## 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 1. Short title of Exposure Scenario: Solvent in other applications- Professional

Main User Groups

: **SU 22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

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Mathylayalahayana	SAFETY DATA SHEET
Methylcyclonexane	
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Sector of use	: <b>SU 22, SU0:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen), Other
Process category	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation)</li> </ul>
	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/
	discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10:</b> Roller application or brushing <b>PROC11:</b> Non industrial spraying
	<b>PROC13:</b> Treatment of articles by dipping and pouring
Environmental release category	: <b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
2.1 Contributing scenario control dispersive indoor use of procession of processing aids in open syster	ling environmental exposure for:ERC8a, ERC8d: Wide ing aids in open systems, Wide dispersive outdoor use ns
Environment factors not influenced t	by risk management
Other given operational conditions a	ffecting environmental exposure
other given operational conditions a	
Emission or Release Factor: Air	: 40 %
Emission of Release Factor: Water Emission of Release Factor: Soil	. 5% · 0%
Local release rate: Water	: 8.4 kg/dav
Local release rate: Air	: 66 kg/day
Local release rate: Soil	:
Remarks	: There is no direct exposure to soil.
Technical conditions and measures /	Organizational measures
Air	<ul> <li>Treat air emission to provide a typical removal efficiency of (%): (Effectiveness: 0 %)</li> </ul>
Water	<ul> <li>Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): (Effectiveness: &gt; 96,4 %)</li> </ul>
Conditions and measures related to	municipal sewage treatment plant
Type of Sewage Treatment Plant Flow rate of sewage treatment	<ul><li>Municipal sewage treatment plant, No</li><li>2.000 m3/d</li></ul>
plant effluent Sludge Treatment	: Agricultural soil, Yes, applicable
2.2 Contributing scenario control	ling worker exposure for: PROC1: Use in closed
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process, no likelihood of exposure				
Product characteristics Physical Form (at time of use) :	Liquid substance			
Frequency and duration of useExposure duration:Frequency of use:	> 4 h 5 days/week			
Human factors not influenced by risk m Exposed skin area :	anagement One hand face only (240 cm2)			
Other operational conditions affecting v Outdoor / Indoor :	workers exposure Indoor			
<b>Technical conditions and measures</b> Local exhaust ventilation, No				
Conditions and measures related to per None required Respiratory Protection, None required	rsonal protection, hygiene and health evaluation			
2.2 Contributing scenario controllin continuous process with occasiona	g worker exposure for: PROC2: Use in closed, I controlled exposure			
Product characteristics Physical Form (at time of use) :	Liquid substance			
Frequency and duration of useExposure duration:Frequency of use:	> 4 h 5 days/week			
Human factors not influenced by risk management Exposed skin area : Palms of both hands (480 cm2)				
Other operational conditions affecting v Outdoor / Indoor :	workers exposure Indoor			
Technical conditions and measures Local exhaust ventilation, No				
Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required				
2.2 Contributing scenario controllin process (synthesis or formulation)	g worker exposure for: PROC3: Use in closed batch			
Product characteristics Physical Form (at time of use) :	Liquid substance			
Frequency and duration of useExposure duration:Frequency of use:	> 4 h 5 days/week			
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Human factors not influenced by risk management Exposed skin area : One hand face only (240 cm2)							
Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor							
Technical conditions and measures Local exhaust ventilation, No							
Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required							
2.2 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises							
Product characteristics Physical Form (at time of use) : Liquid substance							
Frequency and duration of useExposure duration: > 4 hFrequency of use: 5 days/week							
Human factors not influenced by risk management         Exposed skin area       : Palms of both hands (480 cm2)							
Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor							
Technical conditions and measures Local exhaust ventilation, No							
Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %)							
2.2 Contributing scenario controlling worker exposure for: PROC8a, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities							
Product characteristics Physical Form (at time of use) : Liquid substance							
Frequency and duration of useExposure duration: > 4 hFrequency of use: 5 days/week							
Human factors not influenced by risk managementExposed skin area: Two hands (960 cm2)							
Other operational conditions affecting workers exposure         Outdoor / Indoor       : Indoor							
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### Technical conditions and measures Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, None required 2.2 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use : 1-4h Exposure duration Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Two hands (960 cm2) Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation. No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %) 2.2 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraving **Product characteristics** Physical Form (at time of use) : Liquid substance Frequency and duration of use Exposure duration : 1-4h Frequency of use : 5 days/week Human factors not influenced by risk management Exposed skin area : Skin : 1500 cm2 Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Local exhaust ventilation, No Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) SDS Number:100000014163 53/56

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Respiratory Protection, Yes (Effectiveness: 95 %)

2.2 Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring								
	-p9 p							
Product charac Physical Form	cteristics n (at time of use)	: Liqui	d substance					
<b>,</b>	(	1						
Frequency and	I duration of use							
Exposure dur	ation	: >4 h	$\therefore > 4 h$					
	use	. 5 ua	ys/week					
Human factors	Human factors not influenced by risk management							
Exposed skin area : Palms of both hands (480 cm2)								
Other operational conditions affecting workers exposure								
Technical conditions and measures Local exhaust ventilation, No								
Conditions and measures related to personal protection, hygiene and health evaluation Protective gloves, APF 10 (Effectiveness: 90 %) Respiratory Protection, Yes (Effectiveness: 90 %)								
3 Exposuro d	stimation and	roforonco to	its source					
5. Exposure e	sumation and	reference to	its source					
Environment								
Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio		
ERC8a, ERC8d	Petrorisk		Freshwater		0,000074			
			Freshwater		0,00018			
			sediment		mg/kg dry	<u>`</u>		
			Marine water		0,00074 µg/	) L		
			Marine sediment		0,000018			
					mg/kg dry weight (d w	)		
			Sewage		0,000074			
			treatment plant		mg/L			
			Agricultural soli		0,000052 mg/kg			
ERC8a: Wide	e dispersive indoo	r use of proces	ssing aids in ope	n systems	;			
ERC8d: Wide	e dispersive outdo	or use of proc	essing aids in op	en system	าร			
Workers/Cons	umers							
Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Leve	el of Exposure	Risk characterization ratio		
PROC1	EasyTRA		Worker - dermal,	long- 0,02	0571 mg/kg/d			
			term – system Worker – inhalat		24547 ma/m3			
			long-term – syste	emic	- 10-11 mg/mo			
			Worker – long-te	rm –   0,02	4078 mg/kg/d			
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		systemic Combined routes		
PROC2	EasyTRA	Worker – dermal, long- term – systemic	0,082286 mg/kg/d	
		Worker – inhalation, long-term – systemic	49,093 mg/m3	
		Worker – long-term – systemic Combined routes	7,096 mg/kg/d	
PROC3	EasyTRA	Worker – dermal, long- term – systemic	0,041143 mg/kg/d	
		Worker – inhalation, long-term – systemic	61,366 mg/m3	
		Worker – long-term – systemic Combined routes	8,808 mg/kg/d	
PROC4	EasyTRA	Worker – dermal, long- term – systemic	0,411429 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	2,165 mg/kg/d	
PROC8a	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	24,547 mg/m3	
		Worker – long-term – systemic Combined routes	4,33 mg/kg/d	
PROC8b	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	2,576 mg/kg/d	
PROC10	EasyTRA	Worker – dermal, long- term – systemic	0,987429 mg/kg/d	
		Worker – inhalation, long-term – systemic	14,728 mg/m3	
		Worker – long-term – systemic Combined routes	3,091 mg/kg/d	
PROC11	EasyTRA	Worker – dermal, long- term – systemic	1,286 mg/kg/d	
		Worker – inhalation, long-term – systemic	12,273 mg/m3	
		Worker – long-term – systemic Combined routes	3,039 mg/kg/d	
PROC13	EasyTRA	Worker – dermal, long- term – systemic	0,822857 mg/kg/d	
		Worker – inhalation, long-term – systemic	24,547 mg/m3	
		Worker – long-term – systemic Combined routes	4,33 mg/kg/d	

PROC1: Use in closed process, no likelihood of exposure

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large

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containers at dedicated facilities

PROC10: Roller application or brushing

PROC11: Non industrial spraying

PROC13: Treatment of articles by dipping and pouring

## 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Predicted releases are not expected to lead to environmental concentrations which would exceed the PNEC when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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