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Sulfur Control Type E

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FION 1: Identification of the substance/mixture and of the company/undertaking		
Product information		
Product Name Material	Sulfur Control Type E1096736	
Use	: Chemical intermediate	
Company	: Chevron Phillips Chemical Company LP 10001 Six Pines Drive The Woodlands, TX 77380	
Emergency telephone:		
Mexico CHEMTREC 01-8 South America SOS-Cote Argentina: +(54)-1159839 EUROPE: BIG +32.14.58 Austria: VIZ +43 1 406 43 Belgium: 070 245 245 (24 Bulgaria: +359 2 9154 233 Croatia: +3851 2348 342 Cyprus: 1401 Czech Republic: Toxicolog Denmark: Danish Poison Estonia: BIG +32.14.5845 Finland: 0800 147 111 09 France: ORFILA number (Germany: BIG +32.14.5845 Greece: (0030) 21077937 Hungary: +36-80-201-199 Iceland: 543 2222 (24 hou Ireland: BIG +32.14.58454 Italy: BIG +32.14.584545 Latvia: State Fire and Res Poisoning and Drug Infor 67042473. (24 hours.)	onal) 0 or 703.527.3887(int'l) 2 9186 1132) China: 0532 8388 9090 00-681-9531 (24 hours) c Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600 431 4545 (phone) or +32.14583516 (telefax) 43 (24 hours/day, 7 days/week) hours/day, 7 days/week) 8 (24 hours/day, 7 days/week) 9	
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3 ()	152 5500 (24 hours/day, 7 days/week)
Malta: +356 2395 2000 The Netherlands: NVIC: +3	81 (0)88 755 8000
Norway: 22 59 13 00 (24 h	
	5 (phone) or +32.14583516 (telefax)
Portugal: CIAV phone num	
Romania: +40213183606	
Slovakia: +421 2 5477 416	6
Slovenia: Phone number: 1	12
Spain: National Emergency hours/day, 7 days/week)	/ Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24
Sweden: 112 – ask for Pois	sons Information
Responsible Department	: Product Safety and Toxicology Group
E-mail address	: SDS@CPChem.com
Website	: www.CPChem.com
SECTION 2: Hazards identification	on

Classification of the substance or mixture

:

:

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

:	Pyrophoric solids, Category 1 Eye irritation, Category 2B Skin sensitization, Category 1 Carcinogenicity, Category 1A Specific target organ toxicity - repeated exposure, Category 1, Inhalation, Respiratory system, Respiratory Tract, Lungs
	Inhalation, Respiratory system, Respiratory Tract, Lungs

Labeling

Symbol(s)

Signal Word



Hazard Statements	 H250: Catches fire spontaneously if exposed to air. H317: May cause an allergic skin reaction. H320: Causes eye irritation. H350: May cause cancer. H372: Causes damage to organs (Respiratory system, Respiratory Tract, Lungs) through prolonged or repeated exposure if inhaled.
Precautionary Statements	 Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P222 Do not allow contact with air. P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
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/ersion 2.3	 P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P335 + P334 Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages. P337 + P313 If eye irritation persists: Get medical advice/ attention.
	 P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Storage: P405 Store locked up. P422 Store contents under inert gas. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.
Carcinogenicity:	
IARC	Group 1: Carcinogenic to humans Nickel Oxide 1313-99-1 Nickel 7440-02-0 Crystalline Silica 14808-60-7 Group 2B: Possibly carcinogenic to humans
NTP	Nickel7440-02-0Known to be human carcinogenNickel Oxide1313-99-1Crystalline Silica14808-60-7Reasonably anticipated to be a human carcinogenNickel7440-02-0
ECTION 3: Composition/info	rmation on ingredients
Synonyms	: Catalyst E CPChem Sulfur Control E
Molecular formula	: Mixture
Component	CAS-No. Weight %
Silica, amorphous	7631-86-9 25 - 35
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Nickel Oxide	1313-99-1	20 - 30	
Nickel	7440-02-0	20 - 30	
Aluminum Oxide	1344-28-1	5 - 15	
Crystalline Silica	14808-60-7	0.1 - 2	

SECTION 4: First aid measures

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General advice		dangerous area. Show this material safety data doctor in attendance.
If inhaled		nysician after significant exposure. If unconscious, overy position and seek medical advice.
In case of skin contact	: If on skin, ri	nse well with water. If on clothes, remove clothes.
In case of eye contact	lenses. Pro	r flush eye(s) with plenty of water. Remove contact tect unharmed eye. Keep eye wide open while ye irritation persists, consult a specialist.
If swallowed	respiratory t unconscious	iting immediately and call a physician. Keep ract clear. Never give anything by mouth to an s person. If symptoms persist, call a physician. immediately to hospital.

SECTION 5: Firefighting measures Flash point : Not applicable Autoignition temperature Catches fire spontaneously if exposed to air. Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Suitable extinguishing media Unsuitable extinguishing High volume water jet. : media Specific hazards during fire : Do not allow run-off from fire fighting to enter drains or water fighting courses. Special protective : Wear self-contained breathing apparatus for firefighting if equipment for fire-fighters 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 : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from combustible protection material. Hazardous decomposition : Hydrogen. Decomposes by reaction with strong acids.

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products		Decompos	ses by react	ion with	alkaline solutio		
SECTION 6: Accidental release	e mea	asures					
Personal precautions	:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.			. Remove		
Environmental precautions	:	or spillage	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	:	vacuum cl disposal a	leaner or by according to	wet-bru local reg	llect with an ele Ishing and plac gulations (see s for disposal.	e in co	ontainer for
SECTION 7: Handling and stor	age						
Handling							
Advice on safe handling	:	vapors/du before use protection be prohibi exchange as content accordanc susceptibl chronic or	st. Avoid ex e. Avoid cor see section ted in the ap and/or exha t may be un- ce with local e to skin ser recurrent re	posure 8. Smoothing policatio aust in wider pres and nation nsitization	particles. Do n - obtain specia h skin and eyes oking, eating ar n area. Provide vork rooms. Op ssure. Dispose tional regulatior on problems or y disease shou hich this mixtur	l instru s. For ad drir suffi ben dr of rin of rin asthru asthru ld not	uctions personal iking should cient air um carefully se water in ersons na, allergies, be
Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from combustible material.					
Storage							
Requirements for storage areas and containers	:	a dry and must be ca Observe la	well-ventilat arefully rese abel precaut	ed place aled an tions. E	Keep containers c. Containers d kept upright t lectrical installa e technological	which o prev ations	are opened vent leakage. / working
Use	:	Chemical	intermediate	Э			
SECTION 8: Exposure controls	s/per	sonal prot	ection				
Ingredients with workplac	e coi	ntrol paran	neters				
IS							
Components	Basi		Value		Control parameter	S	Note
Silica, amorphous	OSH	A Z-3	TWA		80mg/m3 / %SiO2		Dust
	OSH	A Z-3	TWA		20Million particles pe cubic foot	эт [.]	Dust
		4 Z-3	TWA		80mg/m3 / %SiO2		

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	ACGIH	TWA	10 mg/m3	Total
	ACGIH	TWA	3 mg/m3	Respirable
Nickel Oxide	ACGIH	TWA	0.2 mg/m3	
	OSHA Z-1	TWA	1 mg/m3	
	ACGIH	TWA	0.2 mg/m3	A1, Inhalable particulate matter
	OSHA Z-1-A	TWA	1 mg/m3	
Nickel	OSHA Z-1-A	TWA	1 mg/m3	
	ACGIH	TWA	1.5 mg/m3	A5, Inhalable particulate matter
	OSHA Z-1	TWA	1 mg/m3	
Aluminum Oxide	OSHA Z-1	TWA	15 mg/m3	total dust
	OSHA Z-1	TWA	5 mg/m3	respirable fraction
	OSHA Z-1-A	TWA	10 mg/m3	Total dust
	OSHA Z-1-A	TWA	5 mg/m3	respirable dust fraction
	ACGIH	TWA	1 mg/m3	A4, Respirable particulate matter
Crystalline Silica	OSHA Z-3	TWA	250mppcf / %SiO2+5	respirable
	OSHA Z-3	TWA	10mg/m3 / %SiO2+2	respirable
	OSHA Z-3	TWA	0.1 mg/m3	Respirable fraction
	OSHA Z-1-A	TWA	0.1 mg/m3	respirable dust fraction
	ACGIH	TWA	0.025 mg/m3	A2, Respirable particulate matter
	OSHA Z-1	TWA	0.05 mg/m3	Respirable fraction
	OSHA Z-1	TWA	0.05 mg/m3	(respirable dust)
	OSHA CARC	PEL	0.05 mg/m3	respirable

A1 Confirmed human carcinogen

A2 Suspected human carcinogen

A4 Not classifiable as a human carcinogen

A5 Not suspected as a human carcinogen

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Silica, amorphous	7631-86-9	Immediately Dangerous to Life or Health Concentration Value 3000 mg/m ³	1995-03-01
Nickel Oxide	1313-99-1	Immediately Dangerous to Life or Health Concentration Value 10 mg/m ³	1995-03-01
Nickel	7440-02-0	Immediately Dangerous to Life or Health Concentration Value 10 mg/m ³	1995-03-01
Crystalline Silica	14808-60-7	Immediately Dangerous to Life or Health Concentration Value 50 mg/m ³	1995-03-01

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 : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Air-Purifying Respirator for Dusts and Mists / P100. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators

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	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. Safety glasses.
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:. Protective suit. Remove and wash contaminated clothing before re-use. Footwear protecting against chemicals. Skin should be washed after contact.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
CTION 9: Physical and cher	nical properties
Information on basic physic	sical and chemical properties
Appearance	
Form Physical state Color Odor Odor Threshold	 solid solid gray to black Odorless Not applicable
Safety data	
Safety data Flash point	: Not applicable
-	: Not applicable : Not applicable
Flash point	
Flash point Lower explosion limit	: Not applicable
Flash point Lower explosion limit Upper explosion limit	: Not applicable : Not applicable
Flash point Lower explosion limit Upper explosion limit Oxidizing properties	Not applicableNot applicableNo
Flash point Lower explosion limit Upper explosion limit Oxidizing properties Autoignition temperature	 Not applicable Not applicable No Catches fire spontaneously if exposed to air.
Flash point Lower explosion limit Upper explosion limit Oxidizing properties Autoignition temperature Molecular formula	 Not applicable Not applicable No Catches fire spontaneously if exposed to air. Mixture
Flash point Lower explosion limit Upper explosion limit Oxidizing properties Autoignition temperature Molecular formula Molecular weight	 Not applicable Not applicable No Catches fire spontaneously if exposed to air. Mixture Not applicable

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Vapor pressure	: Not applicable		
Relative density	: 0.7		
	. 0.7		
Density	: No data available		
Water solubility	: Insoluble		
Solubility in other solvents	: No data available		
Viscosity, kinematic	: Not applicable		
Relative vapor density	: Not applicable		
Evaporation rate	: Not applicable		
CTION 10: Stability and reactive	vity		
Reactivity	: Self-heating; may catch fire.		
Chemical stability	: No decomposition if stored and applied as directed.		
Possibility of hazardous rea	ctions		
Hazardous reactions	: Further information: No decomposition if stored and applied as directed.		
Conditions to avoid	: Heat, flames and sparks. Exposure to air		
Materials to avoid	: Acids and bases.		
Hazardous decomposition products	 Hydrogen Decomposes by reaction with strong acids. Decomposes by reaction with alkaline solutions. 		
Other data	: No decomposition if stored and applied as directed.		
CTION 11: Toxicological infor	mation		
Acute oral toxicity			
Silica, amorphous	: LD50: > 5,000 mg/kg Species: Rat Method: OECD Test Guideline 401		
Nickel Oxide	LD50 Oral: > 5,000 mg/kg Species: Rat		
Nickel	LD50 Oral: > 9,000 mg/kg		
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	Species: Rat Method: OECD Test Guideline 401 Test substance: yes	
Aluminum Oxide	LD50: >10,000 mg/kg Species: Rat Method: OECD Test Guideline 401	
Sulfur Control Type E Acute inhalation toxicity	: No data available	
Acute dermal toxicity		
Aluminum Oxide	 LD50: > 2,000 mg/kg Species: Rabbit Information given is based on data obtained from similar substances. 	
Sulfur Control Type E Skin irritation	: May cause skin irritation and/or dermatitis.	
Sulfur Control Type E Eye irritation	: Product dust may be irritating to eyes, skin and respiratory system.	
Sulfur Control Type E Sensitization	: May cause sensitization of susceptible persons by skin contact. Information refers to the main ingredient. Causes sensitization.	
Senotoxicity in vitro		
Aluminum Oxide	: Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative	
Carcinogenicity		
Nickel Oxide	:	
Sulfur Control Type E Aspiration toxicity	: No aspiration toxicity classification.	
CMR effects		
Nickel	: Carcinogenicity: Limited evidence of carcinogenicity in anima studies	
Crystalline Silica	Carcinogenicity: Human carcinogen.	
Sulfur Control Type E Further information	: No data available.	
TION 12: Ecological inform	ation	

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Toxicity to fish	: No data available
Toxicity to daphnia and other aquatic invertebrates	: No data is available on the product itself.
Toxicity to algae	: No data available
Biodegradability	: Not applicable
Elimination information (persi	stence and degradability)
Bioaccumulation	: No data available
Mobility	
Aluminum Oxide	: No data available
Additional ecological information	: An environmental hazard cannot be excluded in the event unprofessional handling or disposal., Harmful to aquatic lif with long lasting effects.
Ecotoxicology Assessment	
Short-term (acute) aquatic ha Silica, amorphous	zard : This material is not expected to be harmful to aquatic organisms.
Nickel	: Harmful to aquatic life.
Aluminum Oxide	: This material is not expected to be harmful to aquatic organisms.
Long-term (chronic) aquatic h Silica, amorphous	azard : This material is not expected to be harmful to aquatic organisms.
Nickel Oxide	: May cause long lasting harmful effects to aquatic life.
Nickel	: Harmful to aquatic life with long lasting effects.
Aluminum Oxide	: This material is not expected to be harmful to aquatic organisms.

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

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Use material for its intended may meet the criteria of a ha other State and local regulati regulated components may b	purpose or recycle if possible. This material, if it must be discarded, zardous waste as defined by US EPA under RCRA (40 CFR 261) or 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.
ECTION 14: Transport information	ation
	shown here are for bulk shipments only, and may not apply to kages (see regulatory definition).
Goods Regulations for additient etc.) Therefore, the informat	estic or international mode-specific and quantity-specific Dangerous onal shipping description requirements (e.g., technical name or names, ion shown here, may not always agree with the bill of lading shipping Flashpoints for the material may vary slightly between the SDS and the
	DEPARTMENT OF TRANSPORTATION) S SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II
	I AL MARITIME DANGEROUS GOODS) 6 SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II
	R TRANSPORT ASSOCIATION) 6 SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II
	NGEROUS GOODS BY ROAD (EUROPE)) 6 SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II,
DANGEROUS GOODS (EU	ERNING THE INTERNATIONAL TRANSPORT OF ROPE)) IG SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II
OF DANGEROUS GOODS I	MENT CONCERNING THE INTERNATIONAL CARRIAGE BY INLAND WATERWAYS) & SOLID, INORGANIC, N.O.S., (NICKEL OXIDE, NICKEL), 4.2, II
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National legislation	
SARA 311/312 Hazards	 Pyrophoric (liquid or solid) Acute toxicity (any route of exposure) Respiratory or skin sensitization Carcinogenicity Specific target organ toxicity (single or repeated exposure) Serious eye damage or eye irritation
CERCLA Reportable Quantity	: 333 lbs Nickel
SARA 302 Reportable Quantity	: This material does not contain any components with a SARA 302 RQ.
SARA 302 Threshold Planning Quantity	: This material does not contain any components with a section 302 EHS TPQ.
SARA 304 Reportable Quantity	: This material does not contain any components with a section 304 EHS RQ.
SARA 313 Components	: The following components are subject to reporting levels established by SARA Title III, Section 313:
	: Nickel Oxide - 1313-99-1 Nickel - 7440-02-0 Aluminum Oxide - 1344-28-1
Clean Air Act	
Potential Class	product neither contains, nor was manufactured with a Class I or s II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR Subpt. A, App.A + B).
The following chemical(s) a	re listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 6 : Nickel Oxide - 1313-99-1 Nickel - 7440-02-0
	ain any chemicals listed under the U.S. Clean Air Act Section 112(r) for tion (40 CFR 68.130, Subpart F).
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This product does not contain ar Intermediate or Final VOC's (40	ny chemicals listed under the U.S. Clean Air Act Section 111 SOCM CFR 60.489).
US State Regulations	
Pennsylvania Right To Know :	Silica, amorphous - 7631-86-9 Nickel Oxide - 1313-99-1
	Nickel - 7440-02-0 Aluminum Oxide - 1344-28-1 Crystalline Silica - 14808-60-7
California Prop. 65 : Components	WARNING! This product contains a chemical known in the State of California to cause cancer. Nickel Oxide 1313-99-1 Nickel 7440-02-0 Crystalline Silica 14808-60-7
Notification status Europe REACH Switzerland CH INV United States of America (USA) TSCA Canada DSL	 Not in compliance with the inventory Not in compliance with the inventory On or in compliance with the active portion of the TSCA inventory All components of this product are on the Canadian
Australia AIIC New Zealand NZIoC Japan ENCS Korea KECI	 DSL On the inventory, or in compliance with the inventory Not in compliance with the inventory Not in compliance with the inventory A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).
Philippines PICCS Taiwan TCSI China IECSC	 On the inventory, or in compliance with the inventory On the inventory, or in compliance with the inventory On the inventory, or in compliance with the inventory
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SECTION 16: Other information

NFPA Classification	: Health Hazard: 2 Fire Hazard: 0 Reactivity Hazard: 2	2 2 2
Further information		
Legacy SDS Number	: 5081	

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

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

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

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

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	New Chemical Substances		
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%	ATE	Acute toxicity estimate