

Marlex® HXM 50100-C20 Polyethylene

Version 1.3

Revision Date 2019-10-17

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

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

1.1

Product information

Product Name	: Marlex® HXM 50100-C20 Polyethylene
Material	: 1017224, 1017227, 1017220, 1017222, 1017221, 1017226,
	1017223. 1017225

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Ethylene	74-85-1 200-815-3 601-010-00-3	Chevron Phillips Chemical Company LP 01-2119462827-27-0004
1-Hexene	592-41-6 209-753-1	Chevron Phillips Chemical Company LP 01-2119475505-34-0005

1.3

Details of the supplier of the safety data sheet

Company	: Chevron Phillips Chemical Company LP 10001 Six Pines Drive The Woodlands, TX 77380
Local	 Chevron Phillips Chemicals International N.V. Airport Plaza (Stockholm Building) Leonardo Da Vincilaan 19 1831 Diegem Belgium
	SDS Requests: (800) 852-5530 Technical Information: (832) 813-4862 Responsible Party: Product Safety Group Email:sds@cpchem.com
1.4 Emergency telephone:	
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	Health: 866.442.9628 (North Ame 1.832.813.4984 (Internati Transport: CHEMTREC 800.424.930 Asia: CHEMWATCH (+61 EUROPE: BIG +32.14.58 Mexico CHEMTREC 01-8 South America SOS-Cote Argentina: +(54)-1159839	onal) 00 or 703.527.388 2 9186 1132) Chi 4545 (phone) or - 600-681-9531 (24 c Inside Brazil: 08	na: 0532 8388 9090 -32.14583516 (telefax)	+55.19.3467.1600		
	Responsible Department E-mail address Website	: Product Safe : SDS@CPCh : www.CPChe				
	MEDICAL APPLICATION C/ permanent implantation in th fluids or tissues.					
	Do not use this material in m human body or contact with directly from Chevron Phillips expressly acknowledges the	internal body fluid s Chemical Comp	s or tissues unless the mate any LP or its legal affiliates	erial has been provided		
	Chevron Phillips Chemical C express warranty or implied in the human body or in cont	warranty concerni	ng the suitability of this mat			
SE	CTION 2: Hazards identificat	ion				
2.1	Classification of the substa REGULATION (EC) No 127 Not a hazardous substance of	2/2008	ng to Regulation (EC) No 1:	272/2008.		
2.2	Labeling (REGULATION (E	C) No 1272/2008)			
	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.					
SE	CTION 3: Composition/inform	nation on ingred	ients			
	- 3.2 ostance or Mixture					
	Hazardous ingredients					
	Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]		
	Polyethylene Hexene Copolymer	25213-02-9		99 - 100		
1	O (a) (a) (b) (b) (c) (P P	. 0110			

Contains no hazardous ingredients according to GHS. :

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SECTION 4: First aid measures

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1	Description of first-aid me	asui	res
	If inhaled	:	Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
	In case of skin contact	:	If the molten material gets on skin, quickly cool in water. Seek immediate medical attention. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it.
	In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	If swallowed	:	Do not induce vomiting without medical advice.
SEC	CTION 5: Firefighting measu	ires	
	Flash point	:	No data available
	Autoignition temperature	:	No data available
.1	Extinguishing media		
	Suitable extinguishing media	:	Water. Water mist. Dry chemical. Carbon dioxide (CO2). Foam. If possible, water should be applied as a spray from a fogging nozzle since this is a surface burning material. The application of high velocity water will spread the burning surface layer. Avoid the use of straight streams that may create a dust cloud and the risk of a dust explosion. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.2	Special hazards arising fro Specific hazards during fire fighting	om t :	he substance or mixture Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges.
5.3	Advice for firefighters Special protective equipment for fire-fighters	:	Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.
	Further information	:	This material will burn although it is not easily ignited.
	Fire and explosion protection	:	Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
	Hazardous decomposition products	:	Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, other hydrocarbons and
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hydrocarbon oxidation products (ketones, aldehydes, organic acids) depending on temperature and air availability. Incomplete combustion can also produce formaldehyde.

SECTION 6: Accidental release measures

6.1

Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Sweep up to prevent slipping hazard. Avoid breathing dust. Avoid dust formation.	
6.2			

Environmental precautions

•	not contaminate surface water. ering drains.	Prevent product from
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6.3

Additional advice : Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Ave dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).	

6.4

Reference to other sections

1 Precautions for safe hand Handling	lling
Advice on safe handling	: Use good housekeeping for safe handling of the product. Keep out of water sources and sewers.
	Spilled pellets and powders may create a slipping hazard.
	Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient. At elevated temperatures (>350°F, >177°C), polyethylene can release vapors and gases, which are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. These substances may include acetaldehyde, acetone, acetic acid, formic acid, formaldehyde and acrolein. Based on animal data and limited epidemiological evidence, formaldehyde has been listed as a carcinogen. Following all recommendations within this SDS should minimize exposure to thermal processing emissions.
Advice on protection against fire and explosion	: Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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7.2

Conditions for safe storage, including any incompatibilities

Storage

Requirements for storage areas and containers	:	Keep in a dry place. Keep in a well-ventilated place.
Advice on common storage	:	Do not store together with oxidizing and self-igniting products.

SECTION 8: Exposure controls/personal protection

8.2

Exposure controls Engineering measures

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

Personal protective equipment

Respiratory protection	:	No respiratory protection is normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear an appropriate respirator. Use the following elements for air-purifying respirators: Organic Vapor and Formaldehyde. 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. Dust safety masks are recommended when the dust concentration is excessive.
Eye protection	:	Use of safety glasses with side shields for solid handling is good industrial practice. If this material is heated, wear chemical goggles or safety glasses with side shields or a face shield. If there is potential for dust, use chemical goggles.
Skin and body protection	:	At ambient temperatures use of clean and protective clothing is good industrial practice. If the material is heated or molten, wear thermally insulated, heat-resistant gloves that are able to withstand the temperature of the molten product. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate.
CTION Or Physical and abo	mina	Interneties

SECTION 9: Physical and chemical properties

9.1

Information on basic physical and chemical properties

Appearance

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Form Physical state Color Odor Odor Threshold	 Pellets Solid Opaque Mild to no odor No data available
Safety data	
Flash point	: No data available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Autoignition temperature	: No data available
Thermal decomposition	: Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing.
рН	: Not applicable
Melting point/range	: 90 - 140 °C (194 - 284 °F)
Freezing point	Not applicable
Initial boiling point and boiling	: Not applicable
range Vapor pressure	: Not applicable
Relative density	: Not applicable
Density	: 0,91 - 0,97 g/cm3 Please refer to the Technical Data Sheet (TDS) for more detailed information relating to the nominal physical properties, including density, of this polyethylene resin grade.
Water solubility	: Negligible
Partition coefficient: n- octanol/water	: No data available
Solubility in other solvents	: No data available
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Relative vapor density	: Not applicable
Evaporation rate	: Not applicable

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10.1			
Reactivity	: This material is considered non-reactive under normal ambient and anticipated storage and handling conditions of temperature and pressure.		
10.2			
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.		
10.3			
Possibility of hazardous rea	actions		
10.4 Conditions to avoid	: Avoid prolonged storage at elevated temperature.		
10.5 Materials to avoid	: Avoid contact with strong oxidizing agents.		
Thermal decomposition	 Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing. 		
10.6 Hazardous decomposition products	: Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, other hydrocarbons and hydrocarbon oxidation products (ketones, aldehydes, organic acids) depending on temperature and air availability. Incomplete combustion can also produce formaldehyde.		
Other data	: No decomposition if stored and applied as directed.		
SECTION 11: Toxicological infor	mation		
11.1 Information on toxicologica	l effects		
Marlex® HXM 50100-C20 Po			
Acute oral toxicity			
Marlex® HXM 50100-C20 Po Acute inhalation toxicity			
Marlex® HXM 50100-C20 Po Acute dermal toxicity			
Marlex® HXM 50100-C20 Po Skin irritation	Iyethylene : No skin irritation		
Marlex® HXM 50100-C20 Po	lyethylene		

Marlex® HXM 50100-C20 PolyethyleneEye irritation: No eye irritation

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Marlex® HXM 50100-C20 Polyethylene Sensitization : Did not cause sensitization on laboratory animals.					
Marlex® HXM 50100-C20 F Further information	 Yethylene This product contains POLYMERIZED OLEFINS. During thermal processing (>350°F, >177°C) polyolefins can release vapors and gases (aldehydes,ketones and organic acids) which are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. Generally these irritant effects are all transitory. However, prolonged exposure to irritating off-gases can lead to pulmonary edema. Formaldehyde (an aldehyde) has been classified as a carcinogen based on animal data and limited epidemiological evidence. 				
SECTION 12: Ecological inform	nation				
12.1 Toxicity					
Ecotoxicity effects					
12.2 Persistence and degradab	bility				
Biodegradability	: This material is not expected to be readily biodegradable.				
2.3 Bioaccumulative potential Elimination information (persistence and degradability)					
Bioaccumulation	: Does not bioaccumulate.				
12.4 Mobility in soil					
Mobility	: The product is insoluble and floats on water.				
 12.5 Results of PBT and vPvB 12.6 Other adverse effects Additional ecological information 	assessment : This material is not expected to be harmful to aquatic organisms., Fish or birds may eat pellets which may obstruct their digestive tracts.				
Ecotoxicology Assessment					
SECTION 13: Disposal considerations					
13.1 Waste treatment methods The information in this SDS pertains only to the product as shipped.					
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Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14: Transport information

14.1 - 14.7

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)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

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SECTION 15: Regulatory information

15.1

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

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

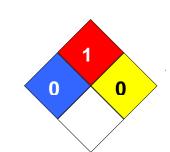
Water contaminating class (Germany)	: nwg not water endangering
15.2	
Major Accident Hazard Legislation	: 96/82/EC Update: 2003 Directive 96/82/EC does not apply
Notification status Europe REACH Switzerland CH INV United States of America (USA TSCA Canada DSL Australia AICS New Zealand NZIoC Japan ENCS Korea KECI	 On the inventory, or in compliance with the inventory On the inventory, or in compliance with the inventory On or in compliance with the active portion of the TSCA inventory All components of this product are on the Canadian DSL 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 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 On the inventory, or in compliance with the inventory Che inventory, or in compliance with the inventory Che inventory, or in compliance with the inventory Inthis 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.

Philippines PICCS China IECSC Taiwan TCSI

SECTION 16: Other information

NFPA Classification

: Health Hazard: 0 Fire Hazard: 1 Reactivity Hazard: 0



Further information

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

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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 Government Industrial Hygienists LD50 Lethal Dose 50% AICS Australia, Inventory of Chemical Substances LOAEL Lowest Observed Adverse Effect Level DSL Canada, Domestic Substances List NFPA National Fire Protection Agency List 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 GEGST EOSCA Generic Exposure OSHA Occupational Safety & Health Administration EINECS European Oilfield Specialty Chemicals Association PEL Permissible Exposure Limit EINECS Europaan Inventory of Existing Chemical Substances PRNT Presumed Not Toxic MAK Germany Maximum Concentration Values SARA Superfund Amendments and Reauthorization Act. IARC	k	Key or legend to abbreviations and acronyms used in the safety data sheet				
SubstancesLevelDSLCanada, Domestic Substances ListNFPANational Fire Protection Agency Sate and Safety & HealthNDSLCanada, Non-Domestic Substances ListNIOSHNational Institute for Occupational Safety & HealthCNSCentral Nervous SystemNTPNational Institute for Occupational Safety & HealthCASChemical Abstract ServiceNZloCNew Zealand Inventory of ChemicalsEC50Effective ConcentrationNOAELNo Observable Adverse Effect LevelEC50Effective Concentration 50%NOECNo Observed Effect ConcentrationEGESTEOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Inventory of Existing Chemical SubstancesPELPermissible Exposure Limit Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized SystemRCRA Resource Conservation Recovery ActIARCInternational Agency for Research on CancerTLVThreshold Limit ValueIENCSJapan, Inventory of Existing Chemical SubstancesTWATime Weighted AverageENCSJapan, Inventory of Existing Chemical SubstancesTWATime Weighted AverageKECIKorea, Existing Chemical New Chemical SubstancesTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical Inventory </td <td>ACGIH</td> <td></td> <td>LD50</td> <td></td>	ACGIH		LD50			
ListMOSHNational Institute for Occupational Safety & HealthNDSLCanada, Non-Domestic Substances ListNIOSHNational Institute for Occupational Safety & HealthCNSCentral Nervous SystemNTPNational Toxicology ProgramCASChemical Abstract ServiceNZloCNew Zealand Inventory of ChemicalsEC50Effective ConcentrationNOAELNo Observable Adverse Effect LevelEC50Effective Concentration 50%NOECNo Observable Adverse Effect LevelEGSTEOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Oilfield Specialty Chemicals AssociationPELPermissible Exposure Limit Commercial Chemical SubstancesEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not Toxic>=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVTime Weighted AverageEINCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control Act Biological MaterialsENCSJapan, Inventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSLess Than or Equal ToWHMISWorkplace Hazardous Materials Biolog		Substances	LOAEL	Level		
Substances ListSafety & HealthCNSCentral Nervous SystemNTPNational Toxicology ProgramCASChemical Abstract ServiceNZloCNew Zealand Inventory of ChemicalsEC50Effective ConcentrationNOAELNo Observable Adverse Effect LevelEC50Effective Concentration 50%NOECNo Observed Effect ConcentrationEG51EOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Olifield Specialty Chemicals AssociationPELPermissible Exposure Limit Commercial Chemical SubstancesEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized System on CancerSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTSCAToxic Substance Control ActKECIKorea, Existing Chemical New Chemical SubstancesUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological MaterialsLess Than or Equal ToWHMISWorkplace Hazardous Materials Information System		List	NFPA	National Fire Protection Agency		
CASChemical Abstract ServiceNZloCNew Zealand Inventory of ChemicalsEC50Effective ConcentrationNOAELNo Observable Adverse Effect LevelEC50Effective Concentration 50%NOECNo Observable Adverse Effect LevelEC50Effective Concentration 50%NOECNo Observed Effect Concentration Concupational Safety & Health AdministrationEGSTEOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Oilfield Specialty Chemicals AssociationPELPermissible Exposure LimitEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized System Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTSCAToxic Substance Control ActKECIKorea, Existing Chemical New Chemical SubstancesUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	NDSL		NIOSH	Safety & Health		
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EC50Effective Concentration 50%NOECNo Observed Effect ConcentrationEGESTEOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Oilfield Specialty Chemicals AssociationPELPermissible Exposure LimitEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized System Inhibition Concentration 50%STELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueENCSSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical New Chemical SubstancesUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=			NZIoC	New Zealand Inventory of Chemicals		
EGESTEOSCA Generic Exposure Scenario ToolOSHAOccupational Safety & Health AdministrationEOSCAEuropean Oilfield Specialty Chemicals AssociationPELPermissible Exposure LimitEINECSEuropean Inventory of Existing 	EC50	Effective Concentration				
Scenario ToolAdministrationEOSCAEuropean Oilfield Specialty Chemicals AssociationPELPermissible Exposure LimitEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized SystemRCRAResource Conservation Recovery Act>=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCJapan, Inventory of Existing Chemical Substances in ChinaTSCAToxic Substance Control ActKECIKorea, Existing Chemical New Chemical SubstancesUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration		
Chemicals AssociationPICCSEINECSEuropean Inventory of Existing Chemical SubstancesPICCSPhilippines Inventory of Commercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized SystemRCRAResource Conservation Recovery Act>=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical New Chemical InventoryUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	EGEST		OSHA			
Chemical SubstancesCommercial Chemical SubstancesMAKGermany Maximum Concentration ValuesPRNTPresumed Not ToxicGHSGlobally Harmonized SystemRCRAResource Conservation Recovery Act>=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical InventoryUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	EOSCA		PEL	Permissible Exposure Limit		
ValuesRCRAResource Conservation Recovery ActS=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical InventoryUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	EINECS	Chemical Substances		Commercial Chemical Substances		
Act>=Greater Than or Equal ToSTELShort-term Exposure LimitIC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical InventoryUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	MAK		PRNT	Presumed Not Toxic		
IC50Inhibition Concentration 50%SARASuperfund Amendments and Reauthorization Act.IARCInternational Agency for Research on CancerTLVThreshold Limit ValueIECSCInventory of Existing Chemical Substances in ChinaTWATime Weighted AverageENCSJapan, Inventory of Existing and New Chemical SubstancesTSCAToxic Substance Control ActKECIKorea, Existing Chemical InventoryUVCBUnknown or Variable Composition, Complex Reaction Products, and Biological Materials<=	GHS	Globally Harmonized System	RCRA	-		
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 <=	>=	Greater Than or Equal To	STEL	Short-term Exposure Limit		
on Cancer TWA IECSC Inventory of Existing Chemical Substances in China TWA ENCS Japan, Inventory of Existing and New Chemical Substances TSCA KECI Korea, Existing Chemical Inventory UVCB UNKnown or Variable Composition, Complex Reaction Products, and Biological Materials <=	IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and		
Substances in China TSCA ENCS Japan, Inventory of Existing and New Chemical Substances TSCA KECI Korea, Existing Chemical Inventory UVCB UVCB Unknown or Variable Composition, Complex Reaction Products, and Biological Materials <=	IARC		TLV	Threshold Limit Value		
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 <=	IECSC		TWA	Time Weighted Average		
KECI Korea, Existing Chemical Inventory UVCB Unknown or Variable Composition, Complex Reaction Products, and Biological Materials <=	ENCS	Japan, Inventory of Existing and	TSCA	Toxic Substance Control Act		
Information System	KECI	Korea, Existing Chemical Inventory		Biological Materials		
	<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials		
	LC50	Lethal Concentration 50%				