SAFETY DATA SHEET

In accordance with Occupational Safety and Health Act's Standard of Classification and Labelling of Chemical Substances and MSDS

Shell Poly Alpha Olefin 6

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Shell Poly Alpha Olefin 6
Product code	:	X1750
CAS-No.	:	68037-01-4

Recommended use of the chemical and restrictions on use

Recommended use	:	Chemical intermediate.
Restrictions on use	:	This product must not be used in applications other than the above without first seeking the advice of the supplier.

Manufacturer or supplier's details

Supplier	:	SHELL EASTERN CHEMICALS (S) A REGISTERED BUSINESS OF SHELL EASTERN TRADING (PTE) LTD (UEN:198902087C) 9 North Buona Vista Drive , #07-01 The Metropolis Tower 1 Singapore 138588 Singapore
Telephone	:	+ 82 2 360 1169
Telefax	:	+82 2 393 6196
Contact for Safety Data Sheet	:	sccmsds@shell.com
Emergency telephone number	:	+ (65) 6542 9595 (Alert-SGS)
Organization that prepared the SDS	:	JOIN International Ltd. (JIL) Samsung Cheil Bldg., 18th Fl, 309, Tereran-ro, Gangnam-gu, Seoul, 06151, Republic of Korea +82 (0)2 527 4317 +82 (0)2 527 4314 (FAX)

2. HAZARDS IDENTIFICATION

GHS Classification

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements

Hazard pictograms : No Hazard Symbol required

Signal word : No signal word

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Precautionary statements :

Prevention:
No precautionary phrases.

Response:
No precautionary phrases.

Storage:
No precautionary phrases.

Disposal:
No precautionary phrases.

Other hazards which do not result in classification

Not classified as flammable but will burn.Repeated exposure may cause skin dryness or cracking.
NFPA Rating (Health, Fire, Reactivity) : 0, 1, 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
Polyalphaolefin	Dec-1-ene, oligomers, hydrogenated	68037-01-4	100

4. FIRST-AID MEASURES

General advice : Not expected to be a health hazard when used under normal conditions.

In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.
In case of skin contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
If inhaled	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
If swallowed	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	:	Not considered to be an inhalation hazard under normal conditions of use. Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. No specific hazards under normal use conditions. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. No specific hazards under normal use conditions. Ingestion may result in nausea, vomiting and/or diarrhoea.
Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
Notes to physician	:	Call a doctor or poison control center for guidance. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable and unsuitable extinguishing media

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water.

The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Specific extinguishing methods	:	Standard procedure for chemical fires. Clear fire area of all non-emergency personnel. Keep adjacent containers cool by spraying with water.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.
	:	Avoid contact with skin, eyes and clothing. Be ready for fire or possible exposure. Stay upwind and out of low areas. Do not operate electrical equipment. If contamination of site occurs remediation may require specialist advice. Keep animals off contaminated vegetation.
Environmental precautions	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Use appropriate containment to avoid environmental contamination. Ventilate contaminated area thoroughly.
Methods and materials for containment and cleaning up	:	For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
Additional advice	:	For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of

this Safety Data Sheet.

7. HANDLING AND STORAGE

General Precautions	:	Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed.
Advice on safe handling	:	Avoid contact with the skin. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<= 10 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Handle and open container with care in a well-ventilated area. Do NOT use compressed air for filling, discharging, or handling operations.
Avoidance of contact	:	Strong oxidising agents.
Product Transfer	:	Keep containers closed when not in use. Refer to guidance under Handling section.

Safe storage methods (including conditions to be avoided)

Conditions for safe storage	:	Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.
Other data	:	Bulk storage tanks should be diked (bunded). Keep away from aerosols, flammables, oxidizing agents, corrosives and from products harmful or toxic to man or to the environment. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Nitrogen blanket recommended.
Packaging material	:	Suitable material: For containers, or container linings use mild steel, stainless steel. Unsuitable material: Copper., Copper alloys.

Container Advice	:	Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Specific use(s)	:	Not applicable Ensure that all local regulations regarding handling and storage facilities are followed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp
L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures	:	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. Adequate ventilation to control airborne concentrations. The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: General Information: Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection	:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
Eye protection	:	If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Hand protection Remarks	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber. Incidental contact/Splash protection: PVC, neoprene or nitrile rubber gloves For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Skin and body protection	:	Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Hygiene measures	:	Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use.

Environmental exposure controls

General advice	:	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. Information on accidental release measures are to be found in section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid at room temperature.
Colour	:	Clear colourless
Odour	:	odourless
Odour Threshold	:	Data not available
pH	:	Data not available
Melting / freezing point	:	Data not available
Boiling point/boiling range	:	> 235 °C / 455 °F
Flash point	:	218 °C / 424 °F Method: IP 34
Evaporation rate	:	Data not available
Flammability (liquids)	:	Does not sustain combustion.

Upper/Lower explosion limit

Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	< 0.1 hPa (20 °C / 68 °F)

Solubility(ies)

Water solubility	:	negligible
Relative vapour density	:	Data not available
Relative density	:	0.826 (15 °C / 59 °F)

Density	:	826 kg/m3 (15 °C / 59 °F)
Partition coefficient: n-octanol/water	:	Data not available
Auto-ignition temperature	:	343 °C / 649 °F
Decomposition temperature	:	Data not available
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	30.5 mm2/s (40 °C / 104 °F)
Explosive properties	:	Not applicable
Oxidizing properties	:	Data not available
Surface tension	:	Data not available
Conductivity	:	Low conductivity: < 100 pS/m The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid
Particle size	:	Data not available
Molecular weight	:	Data not available

10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions:
: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph. No hazardous reaction is expected when handled and stored according to provisions
Avoid contact with strong Lewis or mineral acids. Should be reacted with halogens only under controlled conditions. Free radical initiators should be avoided.

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources. Avoid exposure to air.

Incompatible materials	:	Strong oxidising agents.
Hazardous decomposition products	:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Basis for assessment	:	Information given is based on product testing, and/or similar products, and/or components.
Information on likely routes of exposure	:	Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Health hazard information

Acute toxicity

Product:

Acute oral toxicity	:	LD50 Rat: > 5000 mg/kg Remarks: Low toxicity:
Acute inhalation toxicity	:	Remarks: Low toxicity by inhalation.
Acute dermal toxicity	:	LD50 Rabbit: > 2000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:

Acute oral toxicity	:	LD50 Rat: > 5000 mg/kg Remarks: Low toxicity:
Acute inhalation toxicity	:	Remarks: Low toxicity by inhalation.
Acute dermal toxicity	:	LD50 Rabbit: > 2000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis., Not irritating to skin.

Components:

Polyalphaolefin:
Remarks: Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis., Not irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Insufficient to classify.

Components:

Polyalphaolefin:
Remarks: Slightly irritating to the eye., Insufficient to classify.

Respiratory or skin sensitisation

Product:

Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Material	GHS/CLP Carcinogenicity Classification
Polyalphaolefin	No carcinogenicity classification.

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic

Components:

Polyalphaolefin:

: Remarks: Non mutagenic

Reproductive toxicity

Product:

:
Remarks: Does not impair fertility., Not a developmental toxicant., Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:

:
Remarks: Does not impair fertility., Not a developmental toxicant., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:
Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Components:

Polyalphaolefin:
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Components:
Polyalphaolefin:
Not an aspiration hazard.

Further information

Product:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Components:
Polyalphaolefin:
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

12. ECOLOGICAL INFORMATION

Basis for assessment : Information given is based on product testing.

Ecotoxicity

Product:

Toxicity to fish (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to crustacean (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to algae/aquatic plants (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

Toxicity to crustacean (Chronic toxicity) : Remarks: NOEC/NOEL > 100 mg/l

Toxicity to microorganisms (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Components:
Polyalphaolefin :

Toxicity to fish (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to crustacean (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to algae/aquatic plants (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to microorganisms (Acute toxicity) : Remarks: Not toxic at limit of water solubility:

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

Toxicity to crustacean(Chronic toxicity) : Remarks: NOEC/NOEL > 100 mg/l

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Components:
Polyalphaolefin :

Biodegradability : Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Partition coefficient: n-octanol/water : Remarks: Data not available

Components:
Polyalphaolefin :
Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Mobility in soil

Product:

Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil particles and will not be mobile.

Components:
Polyalphaolefin :
Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil particles and will not be mobile.

Other adverse effects

no data available

Product:

Additional ecological information : Does not have ozone depletion potential.

Components:
Polyalphaolefin :

Additional ecological information : Does not have ozone depletion potential.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

Do not dispose into the environment, in drains or in water courses
Waste product should not be allowed to contaminate soil or water.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local regulations may be more stringent than regional or

national requirements and must be complied with.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.

Disposal considerations

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

National Regulations

Refer to section 15 for specific national regulation.

International Regulations

ADR
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

Pollution category : Data not available
Ship type : Data not available
Product name : Data not available

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

15. REGULATORY INFORMATION

National regulatory information
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

INDUSTRY SAFETY & HEALTH ACT:	Hazardous substances prohibited from manufacturing, etc., Not applicable

	Hazardous substances subject to authorization, Not applicable
	Hazardous substances subject to control, Not applicable
	Substances established for exposure limits, Not applicable
	Hazardous factor subject to keep below permissible limit, Not applicable
	Hazardous Factors Subject to Working Environment Monitoring, Not applicable
	Hazardous Factors Subject to Special Medical Examination, Not applicable
CHEMICALS CONTROL ACT:	Toxic chemical substances, Not applicable
	Authorization chemical substances, Not applicable
	Restricted chemical substances, Not applicable
	Prohibited chemical substances, Not applicable
	Accident precaution chemical substance, Not applicable
DANGEROUS GOODS SAFE CONTROL ACT:	Category/Classification of dangerous material:, Category 4 Dangerous Goods (Flammable Liquids), Grade 4 petroleum chemicals
WASTES MANAGEMENT ACT:	Treat with Article 4/5/24/25 of Disposal Considerations Section.

Other requirements in domestic and other countries

The components of this product are reported in the following inventories:

AICS : Listed

DSL : Listed

IECSC : Listed

ENCS : Listed

KECI	:	Listed
NZIoC	:	Listed
PICCS	:	Listed
TSCA	:	Listed
TCSI	:	Listed

16. OTHER INFORMATION

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Further information

Training advice	:	Provide adequate information, instruction and training for operators.

Sources of key data used to compile the Safety Data Sheet	:	The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).
Issuing date	:	2017.02.13

Revision number and date

Number of Revision	:	1.2
Revision Date	:	2022.08.04
Other information	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.

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.

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