Shell Rimula R4 X 15W-40

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. PRODUCT AND COMPANY ID	DEN.	TIFICATION	
Product name	:	Shell Rimula R4 X 15W-40	
Product code	:	001E7746	
Manufacturer or supplier's	deta	ails	
Supplier	:	Shell Eastern Petroleum (Pte) Ltd (196000089G) The Metropolis Tower 1, 9 North Buona Vista Drive, #07-01 Singapore 138588 Singapore	
Telephone		(+65) 62632975	
Telefax		(+65) 62632049	
Emergency telephone number	:	+65 6263 2975	
Email Contact for Safety Data Sheet	:	If you have any enquiries about the please email lubricantSDS@shell.c	
Recommended use of the c	hen	nical and restrictions on use	
Recommended use	:	Engine oil.	

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:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used oil may contain harmful impurities.Not classified as flammable but will burn.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

Chemical nature

- Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.
 Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).
- : * contains one or more of the following CAS-numbers: 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 68037-01-4, 72623-86-0, 72623-87-1, 8042-47-5, 848301-69-9, 68649-12-7, 151006-60-9, 163149-28-8.

Hazardous componen Chemical name	CAS-No.	Classification	Concentration (%
		Classification	w/w)
Interchangeable low viscosity base oil (<20,5 cSt @40°C) *	Not Assigned	Asp. Tox.1; H304	0 - 90
Alkaryl amine	36878-20-3	Aquatic Chronic4; H413	0 - < 3
Zinc dialkyldithiophosphate	68784-31-6	Eye Dam.1; H318 Aquatic Acute2; H401 Aquatic Chronic2; H411	0 - < 2.4
Zinc dialkyldithiophosphate	4259-15-8	Eye Dam.1; H318 Aquatic Chronic2; H411	0 - < 2.4
Zinc dialkyl dithiophosphate	84605-29-8	Skin Irrit.2; H315 Eye Dam.1; H318 Aquatic Chronic2; H411 Acute Tox.5; H303 Aquatic Acute2; H401	0 - < 1.9
Zinc dialkyldithiophosphate	113706-15-3	Acute Tox.5; H303 Skin Irrit.2; H315	0 - < 1.9

Hazardous components

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		Eye Dam.1; H318 Aquatic Acute2; H401 Aquatic Chronic2; H411		
Calcium sulphonate	70024-69-0	Skin Sens.1B; H317	0 - < 0.9	
Calcium alkaryl sulphonate	722503-68-6	Skin Sens.1B; H317	0 - < 0.9	
Calcium alkaryl sulphonate**	Not Assigned	Skin Sens.1B; H317	0 - < 0.9	

** polymer exempt.

For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES	
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
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.
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.
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	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. 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	: Treat symptomatically.
5. FIRE-FIGHTING MEASURES	
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	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and

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		gases (smoke). Carbon monoxide may be evolved if ir occurs. Unidentified organic and inorganic cor	•
Specific extinguishing methods	:	Use extinguishing measures that are a circumstances and the surrounding en	
Special protective equipment for firefighters	:	Proper protective equipment including gloves are to be worn; chemical resist large contact with spilled product is ex Breathing Apparatus must be worn wh a confined space. Select fire fighter's or relevant Standards (e.g. Europe: EN4	ant suit is indicated if pected. Self-Contained nen approaching a fire in clothing approved to

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Environmental precautions	: Avoid contact with skin and eyes.
	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
	Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	 Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
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	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. 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.

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Advice on safe handling	Avoid prolonged or repeated co Avoid inhaling vapour and/or mi When handling product in drum worn and proper handling equip Properly dispose of any contam materials in order to prevent fire	ists. s, safety footwear should be oment should be used. iinated rags or cleaning
Avoidance of contact	Strong oxidising agents.	
Product Transfer	Proper grounding and bonding p during all bulk transfer operation	
Storage		
Other data	Keep container tightly closed an place. Use properly labeled and closal	
	Store at ambient temperature.	
Packaging material	Suitable material: For container steel or high density polyethyler Unsuitable material: PVC.	
Container Advice	Polyethylene containers should temperatures because of possib	

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	PEL (long term) (Mist)	5 mg/m3	SG OEL
Oil mist, mineral	Not Assigned	PEL (short term) (Mist)	10 mg/m3	SG OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

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.

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samples analysed by an accred Examples of sources of recomm contact the supplier. Further na	ent methods should be applied by a lited laboratory. nended exposure measurement me tional methods may be available. al Safety and Health (NIOSH), USA	thods are given below or
Occupational Safety and Health http://www.osha.gov/	Administration (OSHA), USA: Sam SE), UK: Methods for the Determina	
http://www.hse.gov.uk/ Institut für Arbeitsschutz Deutsc	hen Gesetzlichen Unfallversicherur	
http://www.dguv.de/inhalt/index L'Institut National de Recherche	.jsp e et de Securité, (INRS), France http	o://www.inrs.fr/accueil
Engineering measures	: The level of protection and types vary depending upon potential e controls based on a risk assess Appropriate measures include: Adequate ventilation to control a	xposure conditions. Select nent of local circumstances.
	Where material is heated, sprayed greater potential for airborne cor	
	General Information: Define procedures for safe hand controls.	-
	Educate and train workers in the measures relevant to normal act product.	ivities associated with this
	Ensure appropriate selection, tes equipment used to control expose equipment, local exhaust ventila	sure, e.g. personal protective
	Drain down system prior to equip maintenance. Retain drain downs in sealed sto	
	subsequent recycle. Always observe good personal h washing hands after handling the drinking, and/or smoking. Routin protective equipment to remove contaminated clothing and footw Practice good housekeeping.	ygiene measures, such as e material and before eating, nely wash work clothing and contaminants. Discard
Personal protective equipmer	nt	
Protective measures		
Personal protective equipment PPE suppliers.	(PPE) should meet recommended r	national standards. Check with

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.

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	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].
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. PVC, neoprene or nitrile rubber gloves 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.
	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.
Eye protection	: If material is handled such that it could be splashed into eyes, protective eyewear 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.
Thermal hazards	: Not applicable
Environmental exposure c	ontrols
General advice	: Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from

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	being discharged to waste water. treated in a municipal or industrial before discharge to surface water. Local guidelines on emission limits must be observed for the discharg vapour.	waste water treatment plant s for volatile substances

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid at room temperature.
Colour	:	amber
Odour	:	Data not available
Odour Threshold	:	Data not available
рН	:	Not applicable
pour point	:	-36 °C / -33 °FMethod: ASTM D97
Melting / freezing point		Data not available
Initial boiling point and boiling range	:	> 280 °C / 536 °Festimated value(s)
Flash point	:	230 °C / 446 °F Method: ASTM D92 (COC)
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Data not available
Upper explosion limit	:	Typical 10 %(V)
Lower explosion limit	:	Typical 1 %(V)
Vapour pressure	:	< 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	:	> 1estimated value(s)
Relative density	:	0.881 (15.0 °C / 59.0 °F)
Density	:	881 kg/m3 (15.0 °C / 59.0 °F) Method: ASTM D4052
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	Data not available
Partition coefficient: n- octanol/water	:	log Pow: > 6(based on information on similar products)

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Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 109 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
	14.7 mm2/s (100 °C / 212 °F) Method: ASTM D445	
Explosive properties	: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a s	static accumulator.

10. STABILITY AND REACTIVITY	Y
Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

	Basis for assessment	:	Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
	Information on likely routes of exposure	:	Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Ac	ute toxicity		
	Product:		

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Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the class	ification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data are not met.	, the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the class	ification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Components:

Zinc dialkyldithiophosphate:

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

Zinc dialkyldithiophosphate:

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

Zinc dialkyl dithiophosphate:

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

Zinc dialkyldithiophosphate:

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

Respiratory or skin sensitisation

Product:

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

Components:

Calcium sulphonate:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Germ cell mutagenicity

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Product:		
	· Pemarks: Non mutagonic Based	on available data, the

: Remarks: Non mutagenic, 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.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., 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.

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STOT - repeated exposure

Product:

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

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the

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 environment on disposal., ALL used oil should be handled with caution and skin contact avoided as far as possible.
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Remarks: Continuous contact with used engine oils has caused skin cancer in animal tests.

Remarks: Slightly irritating to respiratory system.

12. ECOLOGICAL INFORMATION

: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).
: Remarks: Based on available data, the classification criteria are not met. Practically non toxic: LL/EL/IL50 > 100 mg/I
: Remarks: Based on available data, the classification criteria are not met. Practically non toxic: LL/EL/IL50 > 100 mg/I
: Remarks: Based on available data, the classification criteria are not met. Practically non toxic: LL/EL/IL50 > 100 mg/I
: Remarks: Based on available data, the classification criteria are not met.
: Remarks: Based on available data, the classification criteria are not met.
: Remarks: Based on available data, the classification criteria are not met.

Persistence and degradability

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Product:		
Biodegradability	: Remarks: Not readily biodegradable., Major of inherently biodegradable, but contains compo- persist in the environment., Persistent per IM International Oil Pollution Compensation (IOF definition: "A non-persistent oil is oil, which, a shipment, consists of hydrocarbon fractions, of which, by volume, distills at a temperature and (b) at least 95% of which, by volume, dis temperature of 370°C (700°F) when tested by Method D-86/78 or any subsequent revision	onents that may IO criteria., PC) Fund at the time of (a) at least 50% of 340°C (645°F) stils at a y the ASTM
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components with the pote bioaccumulate.	ential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information products)	on similar
Mobility in soil		
Product:		
Mobility	 Remarks: Liquid under most environmental c enters soil, it will adsorb to soil particles and mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion potential, pho ozone creation potential or global warming po- is a mixture of non-volatile components, which released to air in any significant quantities un conditions of use. Poorly soluble mixture., Causes physical foul organisms. Mineral oil does not cause chronic toxicity to organisms at concentrations less than 1 mg/l 	otential., Product ch will not be nder normal ling of aquatic aquatic
13. DISPOSAL CONSIDERATIO	ONS	
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. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
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	Do not dispose into the enviro courses Do not dispose of tank water b drain into the ground. This will contamination. Waste arising from a spillage disposed of in accordance wit preferably to a recognised col competence of the collector of established beforehand.	bottoms by allowing them to I result in soil and groundwater or tank cleaning should be h prevailing regulations, lector or contractor. The
	MARPOL - see International C Pollution from Ships (MARPO technical aspects at controlling	, ,
Contaminated packaging	: Dispose in accordance with proto a recognized collector or contractor sho the collector or contractor sho Disposal should be in accordat national, and local laws and record	ontractor. The competence of uld be established beforehand. Ince with applicable regional,
Local legislation Remarks	: Disposal should be in accorda national, and local laws and re	

14. TRANSPORT INFORMATION

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

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

Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

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

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

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mixture Local Regulations			
Workplace Safety and H Safety and Health (Gen Regulations		This product is in the Act/Regu	not subject to the requirements lations.
Fire Safety Act and Fire Flammable Materials) F		This product is in the Act/Regu	not subject to the requirements lations.
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations		This product is in the Act/Regu	not subject to the requirements lations.
Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations		This product is Act/ Regulatior	not subject to control under this n.
The regulatory informat this material.		comprehensive. (Other regulations may apply to
Other international rec	-		
The components of th REACH TSCA	is product are reported : Not establish : Not all compo	ed.	j inventories:

16. OTHER INFORMATION

Full text of H-Statements

H303 H304	May be harmful if swallowed. May be fatal if swallowed and enters airways.			
H315 H317	Causes skin irritation. May cause an allergic skin reaction.			
H318	Causes serious eye damage.			
H401	Toxic to aquatic life.			
H411	Toxic to aquatic life with long lasting effects.			
H413	May cause long lasting harmful effects to aquatic life.			
Full text of other abbreviations				
Acute Tox.	Acute toxicity			
Aquatic Acute	Short-term (acute) aquatic hazard			
Aquatic Chronic	Long-term (chronic) aquatic hazard			
Asp. Tox.	Aspiration hazard			
Eye Dam.	Serious eye damage			
Skin Irrit.	Skin irritation			
Skin Sens.	Skin sensitisation			

Abbreviations and Acronyms

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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; 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.
Other information	:	A vertical bar () in the left margin indicates an amendment from the previous version.
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).

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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