

# SAFETY DATA SHEET

In accordance with the provisions of Article 41, Industrial Safety & Health Act

## Shell Ondina Oil 15

Version 1.4

Revision Date 2018.10.26

Print Date 2018.10.27

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Shell Ondina Oil 15

Product code : 001A0781

CAS-No. : 8042-47-5

Recommended use of the chemical and restrictions on use

Recommended use : Process oil.

#### Manufacturer or supplier's details

Supplier : Hankook Shell Oil Co., Ltd  
7FL CHONGKUNDANG BLDG. 368-2, 3 GA,  
CHUNGJEOING-RO, SEODAEMOON-GU,  
OR (K.P.O BOX 608)  
Seoul  
South Korea

Telephone : (Technical Department) 02-3149- 5462, 051-620-5137

Telefax : 02-364-5029, 051-620-5182

Emergency telephone number : Seoul 02-3149-5462, Fax 02-364-5029 ; Busan 051-620-5137, Fax 051-620-5182

**Email Contact for Safety Data Sheet** : LUBRICANTSSDS-KR@SHELL.COM

### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Aspiration hazard : Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:  
Not classified as a physical hazard under GHS criteria.  
HEALTH HAZARDS:  
H304 May be fatal if swallowed and enters airways.  
ENVIRONMENTAL HAZARDS:  
Not classified as an environmental hazard under GHS criteria.

Precautionary statements :

**Prevention:**  
No precautionary phrases.

**Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON

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CENTER/doctor.

P331 Do NOT induce vomiting.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components : Contains white mineral oil (petroleum).

### 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.

NFPA Rating (Health, Fire, Reactivity) : 1, 1, 0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : Highly refined mineral oil.  
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

### Components

Chemical name	Common Name	CAS-No.	Concentration [%]
White mineral oil	White mineral oil (petroleum)	8042-47-5	<= 100

## 4. FIRST-AID MEASURES

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.

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- If swallowed : Call emergency number for your location / facility.  
If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
- Most important symptoms and effects, both acute and delayed : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.  
The onset of respiratory symptoms may be delayed for several hours after exposure.  
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.  
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 : Potential for chemical pneumonitis.  
Call a doctor or poison control center for guidance.

### 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 : Hazardous combustion products may include:  
A complex mixture of airborne solid and liquid particulates and gases (smoke).  
Carbon monoxide may be evolved if incomplete combustion occurs.  
Unidentified organic and inorganic compounds.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 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

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relevant Standards (e.g. Europe: EN469).

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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid contact with skin and eyes.
- Environmental precautions : 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 Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

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### 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.
- Advice on safe handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
- Avoidance of contact : Strong oxidising agents.
- Product Transfer : This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.

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- Other data : Keep container tightly closed and in a cool, well-ventilated place.  
Use properly labeled and closable containers.  
  
Store at ambient temperature.
- Packaging material : Suitable material: For containers or container linings, use mild steel or high density polyethylene.  
Unsuitable material: PVC.
- Container Advice : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

### 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	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable fraction)	5 mg/m <sup>3</sup>	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. 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 Sécurité, (INRS), France <http://www.inrs.fr/accueil>

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### Engineering measures

: 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:  
Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

#### General Information:

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.

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.

### 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. 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 [Type A/Type P boiling point >65°C (149°F)].

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

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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.

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 controls

General advice : Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.  
Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid at room temperature.  
Colour : colourless  
Odour : Slight hydrocarbon  
Odour Threshold : Data not available  
pH : Not applicable

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pour point	: -12 °C / 10 °F	Method: ISO 3016
Initial boiling point and boiling range	: > 280 °C / 536 °F	Estimated value(s)
Flash point	: 180 °C / 356 °F	Method: ISO 2592
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Data not available	
Upper/Lower explosion limit		
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F)	estimated value(s)
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Relative vapour density	: > 1	estimated value(s)
Relative density	: 0.850 (15 °C / 59 °F)	
Density	: 850 kg/m <sup>3</sup> (15.0 °C / 59.0 °F)	Method: ISO 12185
Partition coefficient: n-octanol/water	: log Pow: > 6	(based on information on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 15 mm <sup>2</sup> /s (40.0 °C / 104.0 °F)	Method: ASTM D 445
	: 3.3 mm <sup>2</sup> /s (100 °C / 212 °F)	Method: ASTM D 445
Explosive properties	: Not classified	



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Oxidizing properties

: Data not available

Conductivity

: This material is not expected to be a static accumulator.

Molecular weight

: Not applicable

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### 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.  
Stable.  
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.

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### 11. TOXICOLOGICAL INFORMATION

Basis for assessment

: Information given is based on data on the components and the toxicology of similar products.

#### Health hazard information

##### Acute toxicity

###### Product:

Acute oral toxicity

: LD50 rat: > 5,000 mg/kg  
Remarks: Low toxicity:  
Based on available data, the classification criteria are not met.

Remarks: Aspiration into the lungs may cause chemical pneumonitis which can be fatal.

Acute inhalation toxicity

: LC 50 Rat: > 5 mg/l  
Exposure time: 4 h  
Remarks: Low toxicity by inhalation.

Acute dermal toxicity

: LD50 Rabbit: > 5,000 mg/kg  
Remarks: Low toxicity:

#### Skin corrosion/irritation

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### Product:

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

### Serious eye damage/eye irritation

#### Product:

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

### Respiratory or skin sensitisation

#### Product:

Remarks: Not a skin sensitizer.  
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 skin-painting 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.

### Germ cell mutagenicity

#### Product:

: Remarks: Non mutagenic

### 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:**

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

### 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 environment on disposal., ALL used oil should be handled with caution and skin contact avoided as far as possible.

Remarks: Slightly irritating to respiratory system.

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## 12. ECOLOGICAL INFORMATION

Basis for assessment : Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.  
Remarks

### Ecotoxicity

**Product:**

Toxicity to fish (Acute toxicity) :  
Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to crustacean (Acute toxicity) :  
Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to algae/aquatic plants (Acute toxicity) :  
Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic toxicity) : Remarks: NOEC/NOEL > 1 mg/l

Toxicity to crustacean (Chronic toxicity) : Remarks: NOEC/NOEL > 1 mg/l

Toxicity to microorganisms : Remarks: LL/EL/IL50 > 100 mg/l

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(Acute toxicity)

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Practically non toxic:

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

### Persistence and degradability

#### Product:

Biodegradability : Remarks: Major constituents are inherently biodegradable, but contains components that may persist in the environment., Based on available data, the classification criteria are not met.

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: > 6Remarks: (based on information on similar products)

### Mobility in soil

#### Product:

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

### Other adverse effects

no data available

#### Product:

Additional ecological information : Causes physical fouling of aquatic organisms.

Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

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## 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 ground water, or be disposed of into the environment.  
Waste, spills or used product is dangerous waste.

Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of

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the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local legislation  
Remarks

: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

### Disposal considerations

Dispose of in accordance with local regulations.

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## 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

### 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 Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

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## 15. REGULATORY INFORMATION

### National regulatory information

INDUSTRY SAFETY & HEALTH ACT:	Hazardous substances prohibited from manufacturing, etc., Not applicable
	Hazardous substances subject to authorization, Not applicable
	Substances established for exposure limits, Not applicable

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	Hazardous substances subject to control, 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 4 Dangerous Goods (Flammable Liquids), Grade 3 petroleum chemicals
WASTES MANAGEMENT ACT:	Designated waste, Applicable

### Other requirements in domestic and other countries

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

EINECS/ELINCS/EC	: All components listed or polymer exempt.
TSCA	: All components listed.
KECI	: All components listed.

## 16. OTHER INFORMATION

### Full text of other abbreviations

Asp. Tox.                      Aspiration hazard

AllC -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; CPR - Controlled Products Regulations; DIN -

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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.

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 data base, EC 1272 regulation, etc).

The content and format of this safety data sheet is in accordance with the GHS guidelines.

Issuing date : 2013.05.31

### Revision number and date

Number of Revision : 1.4

Revision Date : 2018.10.26

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

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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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