

Safety Data Sheet
Cat Pump Crankcase Oil ISO 68

Version 1.5

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1. IDENTIFICATION OF THE HAZARDOUS CHEMICALS AND OF THE SUPPLIER

Product name : Crankcase Oil ISO 68
 Product code : 001D7745

Manufacturer or supplier's details

Supplier : Advanced Watertek Industries LLC
 Po Box:24647
 Dubai
 United Arab Emirates
 Telephone: +971 4 3333100
 Fax: +971 4 3332570
 Emergency Telephone
 Number: +971 4 3333100

Email Contact for MSDS : sales@advancedwatertek.com

Recommended use of the chemical and restrictions on use

Recommended use : Hydraulic oil

SECTION 2 HAZARD IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

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

GHS Label element

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

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. High-pressure injection under the skin may cause serious damage including local necrosis. Not classified as flammable but will burn.

The classification of this material is based on OSHA HCS 2012 criteria.

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

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

: * 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.

Hazardous components

| Chemical name | Synonyms | CAS-No. | Concentration (% w/w) |
|--|-------------------------|--------------|-----------------------|
| 2,6-di-tert-butyl phenol | 2,6-di-tert-butylphenol | 128-39-2 | 0.1 – 0.9 |
| Interchangeable low viscosity base oil (<20,5 cSt @40°C) * | | Not Assigned | 0-90 |

SECTION 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.

When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.

In case of eye contact : Flush eye with copious quantities of water. Remove contact lens, 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 diarrhea. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

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.

Indication of any immediate medical attention and special treatment needed : Treat symptomatically.

High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimize tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anesthetics, and wide exploration is essential.

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

SECTION 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.

SECTION 7 HANDLING AND STORAGE

- Technical measures : 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.
- Further information on Storage stability : 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.

SECTION 8 EXPOSURE CONTROLS / 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 ³ | OSHA Z-1 |

| | | | | |
|-------------------|--|--------------------------|---------|-------|
| Oil mist, mineral | | TWA (Inhalable fraction) | 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.

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>

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

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)].

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 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Liquid at room temperature. |
| Colour | : | amber |
| Odour | : | Slight hydrocarbon |
| Odour Threshold | : | Data not available |
| pH | : | Not applicable |
| pour point | : | -24 °C / -11 °F Method: ISO 3016 |
| Initial boiling point and boiling range: | : | > 280 °C / 536 °F estimated value(s) |
| Flash point | : | 235 °C / 455 °F |
| Method | : | ISO 2592 |
| 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 | : | > 1 estimated value(s) |
| Relative density | : | 0.886 (15 °C / 59 °F) |
| Density | : | 886 kg/m ³ (15.0 °C / 59.0 °F) Method : ISO 12185 |
| Solubility(ies) Water solubility | : | negligible |
| Solubility in other solvents | : | Data not available |
| Partition coefficient: noctanol/ water | : | Pow: > 6(based on information on similar products) |
| Auto-ignition temperature | : | > 320 °C / 608 °F |
| Viscosity | : | |
| Viscosity, dynamic | : | Data not available |
| Viscosity, kinematic | : | 68 mm ² /s (40.0 °C / 104.0 °F) Method: ISO 3104 |

8.6 mm²/s (100 °C / 212 °F)
 Method: ISO 3104
 1040 mm²/s (0°C/32°F)
 Method: ISO 3104

Explosive properties : Not classified
 Oxidizing properties : Data not available
 Conductivity : This material is not expected to be a static accumulator.

SECTION 10 STABILITY AND REACTIVITY

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 : Hazardous decomposition products are not expected to form during normal storage.

SECTION 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.

Acute toxicity

Product:

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

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

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., 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: Expected to be slightly irritating. Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Product:

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

Germ cell mutagenicity

Product:

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

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic. 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).

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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.

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

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12 ECOLOGICAL INFORMATION

Basis for assessment : 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).

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 daphnia and other aquatic invertebrates (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 (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: Data not available

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

Toxicity to microorganisms

(Acute toxicity) : Remarks: Data not available

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.,
Major constituents are inherently biodegradable, but
contains components that may persist in the environment.

Bioaccumulative potential

Product:

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

Mobility in soil

Product:

Mobility : Remarks: Liquid under most environmental conditions.,
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 : Does not have ozone depletion potential, photochemical
ozone creation potential or global warming potential.
Product is a mixture of non-volatile components, which will
not be released to air in any significant quantities under
normal conditions of use.

Poorly soluble mixture., May cause physical fouling of
aquatic organisms.

Mineral oil is not expected to cause any chronic effects to
aquatic organisms at concentrations less than 1 mg/l.

SECTION 13 DISPOSAL INFORMATION

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 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.

SECTION 14 TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)
Not regulated as a dangerous good

International Regulation

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.

SECTION 15 REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

*: This material does not contain any components with a CERCLA RQ., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

US State Regulations

Pennsylvania Right To Know

Zinc dialkyldithiophosphate

68649-42-3

California Prop. 65

WARNING: This product can expose you to chemicals including Distillates (petroleum), hydrotreated light, Distillates (petroleum), solvent-refined heavy paraffinic, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

| | | |
|--------|---|--|
| EINECS | : | All components listed or polymer exempt. |
| TSCA | : | All components listed. |
| DSL | : | All components listed. |

SECTION 16 OTHER INFORMATION

Further information

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

Full text of other abbreviations

| | | |
|----------------------------|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants. |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |
| Abbreviations and Acronyms | : | The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites. ACGIH = American Conference of Governmental Industrial Hygienists ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials BEL = Biological exposure limits BTEX = Benzene, Toluene, Ethylbenzene, Xylenes CAS = Chemical Abstracts Service CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling COC = Cleveland Open-Cup DIN = Deutsches Institut für Normung DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level DSL = Canada Domestic Substance List EC = European Commission EC50 = Effective Concentration fifty ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals ECHA = European Chemicals Agency EINECS = The European Inventory of Existing Commercial Chemical Substances EL50 = Effective Loading fifty |

ENCS = Japanese Existing and New Chemical Substances Inventory
EWC = European Waste Code
GHS = Globally Harmonised System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Inhibitory Concentration fifty
IL50 = Inhibitory Level fifty
IMDG = International Maritime Dangerous Goods
INV = Chinese Chemicals Inventory
IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables
KECI = Korea Existing Chemicals Inventory
LC50 = Lethal Concentration fifty
LD50 = Lethal Dose fifty per cent.
LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading
LL50 = Lethal Loading fifty
MARPOL = International Convention for the Prevention of Pollution from Ships
NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level
OE_HP V = Occupational Exposure - High Production Volume
PBT = Persistent, Bioaccumulative and Toxic
PICCS = Philippine Inventory of Chemicals and Chemical Substances
PNEC = Predicted No Effect Concentration
REACH = Registration Evaluation and Authorisation Of Chemicals
RID = Regulations Relating to International Carriage of Dangerous Goods by Rail
SKIN_DES = Skin Designation
STEL = Short term exposure limit
TRA = Targeted Risk Assessment
TSCA = US Toxic Substances Control Act
TWA = Time-Weighted Average
vPvB = very Persistent and very Bioaccumulative

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 data base, EC 1272 regulation, etc.).

Revision Date : 23/04/2018

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.