# SAFETY DATA SHEET

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

# Pennzoil Platinum SAE 0W-20 Full Synthetic Motor Oil

| Version | Revision Date: | SDS Number: | Print Date: 10/16/2018 |
|---|---|---|---|
| 1.8 | 10/11/2018 | 800001028727 | Date of last issue: 11/14/2017 |

## SECTION 1. IDENTIFICATION

Product name : Pennzoil Platinum SAE 0W-20 Full Synthetic Motor Oil

Product code : 001D7527

**Manufacturer or supplier's details**

Manufacturer/Supplier : **Shell Oil Products US**
PO Box 4427
Houston TX 77210-4427
USA

SDS Request : (+1) 877-276-7285

Customer Service :

**Emergency telephone number**

Spill Information : 877-504-9351

Health Information : 877-242-7400

**Recommended use of the chemical and restrictions on use**

Recommended use : Engine oil.

## SECTION 2. HAZARDS 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 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**

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.
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 : Synthetic base oil and additives.
Highly refined mineral oil.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.
The highly refined mineral oil is only present as additive diluent.

* 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) |
|---|---|---|---|
| Alkylphenol | dodecylphenol | 27193-86-8 | 0.1 - 0.99 |
| Alkaryl amine | bis(nonylphenyl)amine | 36878-20-3 | 1 - 3 |
| 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.

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

## 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 fire-fighting | : | Hazardous combustion products may include:<br>A complex mixture of airborne solid and liquid particulates and gases (smoke).<br>Carbon monoxide may be evolved if incomplete combustion occurs.<br>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 : Proper grounding and bonding procedures should be used during all bulk transfer operations to avoid static accumulation.

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 tem-

peratures because of possible risk of distortion.

## SECTION 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/m3 | 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 Securité, (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.

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

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 | : | -48 °C / -54 °F<br>Method: ASTM D97 |
| Initial boiling point and boiling range | : | > 280 °C / 536 °F<br>estimated value(s) |
| Flash point | : | 204 °C / 399 °F<br>Method: ASTM D93 (PMCC) |
| Evaporation rate | : | Data not available |

| | | |
|---|---|---|
| Flammability (solid, gas) | : | Data not available |
| Upper explosion limit / upper flammability limit | : | Typical 10 %(V) |
| Lower explosion limit / Lower flammability limit | : | Typical 1 %(V) |
| Vapour pressure | : | < 0.5 Pa (20 °C / 68 °F)<br>estimated value(s) |
| Relative vapour density | : | > 1<br>estimated value(s) |
| Relative density | : | 0.836 (15 °C / 59 °F) |
| Density | : | 836 kg/m3 (15.0 °C / 59.0 °F)<br>Method: ASTM D4052 |
| Solubility(ies) | | |
| Water solubility | : | negligible |
| Solubility in other solvents | : | Data not available |
| Partition coefficient: n-octanol/water | : | log Pow: > 6<br>(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 | : | 43.4 mm2/s (40.0 °C / 104.0 °F)<br>Method: ASTM D445<br>8.6 mm2/s (100 °C / 212 °F)<br>Method: ASTM D445 |
| 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 | : | No decomposition if stored and applied as directed. |

## 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<br>Remarks: Low toxicity:<br>Based on available data, the classification criteria are not met. |
| Acute inhalation toxicity | : | Remarks: Based on available data, the classification criteria are not met. |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg<br>Remarks: Low toxicity:<br>Based on available data, the classification 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.

**Respiratory or skin sensitisation**

**Product:**

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

**Germ cell mutagenicity**

**Product:**

: 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.

| | |
|---|---|
| **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: Continuous contact with used engine oils has caused skin cancer in animal tests.

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 daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Data not available

Toxicity to microorganisms (Acute toxicity) : Remarks: Data not available

**Components:**

**Alkylphenol:**

M-Factor (Acute aquatic toxicity) : 1

**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**

**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.
Causes physical fouling of aquatic organisms.

## SECTION 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 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 Regulations**

**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**

**CERCLA Reportable Quantity**

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| Ethylenediamine | 107-15-3 | 5000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA., The components with RQs are given for information.

**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**

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Ethylenediamine 107-15-3 0.0053 %

**US State Regulations**

**Pennsylvania Right To Know**

| | |
|---|---|
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | 64742-65-0 |
| Zinc dialkyldithiophosphate | 2215-35-2 |
| Distillates (petroleum), hydrotreated heavy paraffinic | 64742-54-7 |
| Highly refined mineral oil | 64741-89-5 |
| diphenylamine | 122-39-4 |

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**California List of Hazardous Substances**

Distillates (petroleum), solvent-dewaxed heavy paraffinic 64742-65-0

**Other regulations:**

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

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

| | | |
|---|---|---|
| EINECS/ELINCS/EC | : | 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.<br><br>ACGIH = American Conference of Governmental Industrial Hygienists<br>ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road<br>AICS = Australian Inventory of Chemical Substances<br>ASTM = American Society for Testing and Materials<br>BEL = Biological exposure limits<br>BTEX = Benzene, Toluene, Ethylbenzene, Xylenes<br>CAS = Chemical Abstracts Service<br>CEFIC = European Chemical Industry Council<br>CLP = Classification Packaging and Labelling<br>COC = Cleveland Open-Cup<br>DIN = Deutsches Institut fur Normung<br>DMEL = Derived Minimal Effect Level<br>DNEL = Derived No Effect Level<br>DSL = Canada Domestic Substance List<br>EC = European Commission<br>EC50 = Effective Concentration fifty<br>ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals<br>ECHA = European Chemicals Agency<br>EINECS = The European Inventory of Existing Commercial Chemical Substances<br>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_HPV = 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

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). |
| Revision Date | : | 10/11/2018 |

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.

US / EN