

# SAFETY DATA SHEET

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200  
Version 7.1 Revision Date: 05/18/2015 Print Date: 05/20/2015

## SECTION 1. IDENTIFICATION

### **Product name : Defoamant A**

Product code : 01-DEFOAMANT-A

### **Manufacturer or supplier's details**

Company : **Sandy Brae Laboratories**

3 South Tatnall Street

Wilmington, DE 19801

USA

SDS Request : 1-302-456-0446

Customer Service : 1-302-456-0446

### **Emergency telephone number**

INFOTRAC (24 hr) : 1-800-535-5053

INFOTRAC International (24hr) : 1-352-323-3500

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

Recommended use : Defoamant for petroleum oil

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

## SECTION 2. HAZARDS IDENTIFICATION

### **GHS Classification**

Flammable liquids : Category 4

Aspiration hazard : Category 1

### **GHS Label element**

Hazard pictograms :

Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:

H227 Combustible liquid.

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:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/ protective clothing/ eye protection/face protection.

### **Response:**

P370+P378 In case of fire: Use appropriate media for extinction.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P331 Do NOT induce vomiting.

### **Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

### **Disposal:**

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

### **Other hazards which do not result in classification**

May form flammable/explosive vapour-air mixture. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air vapour mixtures can occur. The classification of this material is based on OSHA HCS 2012 criteria.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Synonyms : Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics

### **Hazardous components**

Chemical Name	Synonyms	CAS-No.	Concentration (%)
Naphtha (petroleum), hydrotreated heavy	Naphtha (petroleum) hydrotreated heavy	64742-48-9	<= 90

### **Non-Hazardous components**

Chemical Name	Synonyms	CAS-No.	Concentration (%)
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#### **SECTION 4. FIRST-AID MEASURES**

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

If inhaled : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

In case of skin contact : Remove contaminated clothing. If persistent irritation occurs, obtain medical attention.

In case of eye contact : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

If swallowed : 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: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, and effects, both acute and shortness of breath, and/or fever. Defatting dermatitis signs and symptoms may include a burning sensation and/or a delayed dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

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.

Immediate medical attention, special treatment, : Potential for chemical pneumonitis.  
Call a doctor or poison control center for guidance

#### **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 (smoke). : Clear fire area of all non-emergency personnel.  
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases  
Carbon monoxide.  
Unidentified organic and inorganic compounds.  
Flammable vapours may be present even at temperatures below the flash point.  
The vapour is heavier than air, spreads along the ground and distant ignition is possible.  
Will float and can be reignited on surface water.

Specific extinguishing methods : Standard procedure for chemical fires.

Further information : Keep adjacent containers cool by spraying with water.

Special protective equipment for firefighters : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: En469).

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Observe all relevant local and international regulations.  
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.  
Local authorities should be advised if significant spillages cannot be contained.

: Avoid contact with skin, eyes and clothing.  
Isolate hazard area and deny entry to unnecessary or unprotected personnel.  
Do not breathe fumes, vapour.  
Do not operate electrical equipment.

Environmental precautions : Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or

entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

Methods and materials for recovery or safe containment and cleaning up : For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Ventilate contaminated area thoroughly. If contamination of site occurs remediation may require specialist advice.

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. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Center at (800) 424-8802.

waters must : Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424-8802. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

## **SECTION 7. HANDLING AND STORAGE**

Technical measures after handling : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly.

For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed.

Precautions for safe handling : Avoid inhaling vapour and/or mists. Avoid contact with skin, eyes and clothing. Extinguish any naked flames. Do not smoke.

Remove ignition sources. Avoid sparks. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Bulk storage tanks should be diked (bunded). When using do not eat or drink. The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Avoidance of contact : Strong oxidising agents.

Product Transfer charge is : Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient

allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/s until fill pipe submerged to twice its diameter, then  $\leq 7$  m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Refer to guidance under Handling section.

### **Storage**

Conditions for safe storage, including any incompatibilities : Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Other data : Storage Temperature:  
Ambient.

Bulk storage tanks should be diked (bunded).  
Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away

**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: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated

**General Information:**

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle.

**Personal protective equipment**

**Respiratory protection** : 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 unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours [Type A boiling point >65°C (149°F)]. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

**Hand protection**

**Remarks** : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: En374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC, neoprene or nitrile rubber gloves For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

**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 required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes. Wear antistatic and flame retardant clothing, if a local risk assessment deems it so.

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

**Hygiene measures** : Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use. Do not ingest. If swallowed then seek immediate medical assistance.

**Environmental exposure controls**

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

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** : Liquid.  
**Colour** : colourless  
**Odour** : Hydrocarbon  
**Odour Threshold** : not determined  
**pH** : Not applicable  
**Melting point/freezing point** : Not applicable  
**Boiling point/boiling range** : Typical 179 - 213.9 °C / 354 - 417.0 °F  
**Flash point** : Typical 61 - 66 °C / 142 - 151 °F  
**Method: ASTM D-93 / PMCC**  
**Evaporation rate** : 0.04  
**Method: ASTM D 3539, nBuAc=1**  
**Flammability (solid, gas)** : Not applicable  
**Upper explosion limit** : upper flammability limit 6 %(V) Not applicable

Lower explosion limit : lower flammability limit 0.7%(V)  
Vapour pressure : Typical 30 - 93 Pa (0 °C / 32 °F)

Relative vapour density : no data available  
Relative density : 0.78 - 0.81  
Density : Typical 780 - 805 kg/m<sup>3</sup> (15 °C / 59 °F) Method: ASTM D4052

Solubility(ies)  
Water solubility : insoluble  
Partition coefficient : Not applicable  
noctanol/water

Auto-ignition temperature : 235 - 315 °C / 455 - 599 °F Method: ASTM E-659  
Decomposition temperature : Not applicable  
Viscosity  
Viscosity, dynamic : Not applicable  
Viscosity, kinematic : Data not available  
Explosive properties : Not applicable  
Oxidizing properties : Not applicable  
Surface tension : Data not available

Conductivity : Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semiconductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and antistatic additives can greatly influence the conductivity of a liquid

Molecular weight : Not applicable

## **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 : No hazardous reaction is expected when handled and stored according to provisions Stable under normal conditions of use.  
Possibility of hazardous reactions : Reacts with strong oxidising agents.

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.  
Incompatible materials : Strong oxidising agents.  
Hazardous decomposition : Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on products conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Basis for assessment : Information given is based on product testing, and/or similar products, and/or components.

**Information on likely routes of exposure** : Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

### **Acute toxicity**

#### **Product:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Remarks: Low toxicity:  
Acute inhalation toxicity : LC50 (Rat): Exposure time: 4 h Remarks: Low toxicity: LC50 greater than near-saturated vapour concentration.  
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg Remarks: Low toxicity:

### **Skin corrosion/irritation**

#### **Product:**

Remarks : Causes mild skin irritation., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

### **Serious eye damage/eye irritation**

#### **Product:**

Remarks : Expected to be non-irritating to eyes.

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks : Not expected to be a sensitiser.

### **Germ cell mutagenicity**

#### **Product:**

Remarks: Not mutagenic.

### **Carcinogenicity**

#### **Product:**

Remarks: Not expected to be carcinogenic., Tumours produced in animals are not considered relevant to humans.

<b>IARC</b>	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.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>NTP</b>	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 expected to be a developmental toxicant., Not expected to impair fertility.

#### **STOT - single exposure**

**Product** :Remarks: Not expected to be a hazard.

#### **STOT - repeated exposure**

**Product** :Remarks: Kidney: caused kidney effects in male rats which are not considered relevant to humans

#### **Aspiration toxicity**

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

### **SECTION 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.

#### **Ecotoxicity**

##### **Product:**

Toxicity to fish : Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (Acute toxicity)

Toxicity to daphnia and other

aquatic invertebrates : Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (Acute toxicity)

Toxicity to algae : Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (Acute toxicity)

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

Toxicity to daphnia and other

aquatic invertebrates : Remarks: Data not available (Chronic toxicity)

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

#### **Persistence and degradability**

##### **Product:**

Biodegradability : Remarks: Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.

#### **Bioaccumulative potential**

##### **Product:**

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

#### **Mobility in soil**

##### **Product:**

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

#### **Other adverse effects**

no data available

##### **Product:**

Additional ecological information : In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.

### **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 water. Contaminated packaging : Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer. Comply with any local recovery or waste disposal regulations.

Local legislation

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

## SECTION 14. TRANSPORT INFORMATION

### National Regulations

#### US Department of Transportation Classification (49 CFR Parts 171-180)

UN/ID/NA number : UN 1268  
Proper shipping name : PETROLEUM DISTILLATES, N.O.S.  
Class : CBL  
Packing group : III  
Labels : NON  
ERG Code : 128  
Marine pollutant : no

### 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

Pollution category : Annex I  
Ship type : Annex I or Double hull vessels with carriage of oil certification  
Product name : Solvent naphtha

#### 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.

**Additional Information** : This product is being carried under the scope of MARPOL Annex I.

## SECTION 15. REGULATORY INFORMATION

**OSHA Hazards** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

**SARA 311/312 Hazards** : Fire Hazard Acute Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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.

### Pennsylvania Right To Know

Naphtha (petroleum), hydrotreated heavy 64742-48-9

**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.

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

AICS : Listed  
DSL : Listed  
CH INV : Listed  
IECSC : Listed  
KECI : Listed  
NZIoC : Listed  
PICCS : Listed  
EINECS : Listed  
TSCA : Listed

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

## SECTION 16. OTHER INFORMATION

### Further information

NFPA Rating (Health, Fire, Reactivity) : 1, 2, 0

Due to the conversion of this product to GHS classification and labelling, there has been a significant change to the nature of the information presented in chapter 2.

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

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 : 05/18/2015

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.