

KAESER KOMPRESSOREN	SAFETY DATA SHEET 1907/2006/EC				KAESER SIGMA FLUID MOL
	Normal.dotm	Created by: Modified: Pa/UT	Created on: 01.96 Changed on 30 May 2014	Checked by: V12	Released by: QESEM

1. Identity of product and supplier

1.1 Product trade name: KAESER SIGMA FLUID MOL rotary screw compressor cooling oil, 9.0918.0, 9.0920.0, 9.0920.00020, 9.0920.00030, 9.0920.00040, 9.0923.0, 9.5405.0, 9.5411.0, 9.5411.00010, 9.5832.0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Compressor and vacuum pump oil

Relevant identified uses of the substance or mixture and uses advised against: Without prior consultation with the supplier, this product may not be used for any other applications as the ones recommended in Section 1.

1.3 Supplier: KAESER COMPRESSORS AUSTRALIA PTY. LTD.
45 Zenith Road
Melbourne/Victoria
Dandenong South 3175
msds.au@kaeser.com
(+61) 3-9791-5999

E-mail

Technical information:

1.4 Emergency telephone number: (+61) 3-9791-5999

2. Possible hazards

2.1 Classification of the substance or mixture

Directive 1999/45/EC	
Hazard characteristics	R phrases:
Not classified as dangerous under EC criteria.	-

2.2 Labelling elements

Classification according to Directive 1999/45/EU [preparations directive]

EC Hazard Symbol: No Hazard Symbol required.
 EC Classification: Not classified as dangerous under EC criteria.
 R phrases: Not classified
 S phrases: Not classified

2.3 Other hazards

Dangers to human health:

No danger expected under normal conditions. Prolonged or repeated skin contact without washing can clog pores and cause complaints such as oil acne and folliculitis. Used oil can contain damaging contaminants.

Risks to safety:

Not classified as flammable but combustible.

Environment hazards:

Not classified as environmentally harmful.

3. Composition / information on ingredients

3.1 Substances

Product name: Not applicable

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3.2 Mixtures

Preparation: Highly refined mineral oils and additives.

Hazardous components:

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Chemical description	CAS No.:	EU number:	REACH Register No.	Concentration in %
Comparable low-viscosity base oils (<20.5 mm ² /s at 40°C)*	*	*	*	0 - 90

Chemical description	Hazard classification and category	Hazard notes:
Comparable low-viscosity base oils (<20.5 mm ² /s at 40°C)*	Asp. Tox., 1;	H304;

Additional information:

According to IP 346, the highly refined mineral oil contains a DMSO extractable part less than 3% (W/W).

See Section 16 for the full text of the R phrases or H statements declared above..

* Comprises one or more of the following CAS numbers (REACH register numbers): 64742-53-6 (01-2119480375-34), 64742-54-7 (01-2119484627-25), 64742-55-8 (01-2119487077-29), 64742-56-9 (01-2119480132-48), 64742-65-0 (01-2119471299-27), 68037-01-4 (01-2119486452-34), 72623-86-0 (01-2119474878-16), 72623-87-1 (01-2119474889-13), 8042-47-5 (01-2119487078-27), 848301-69-9 (01-0000020164-80).

This mixture does not contain REACH-registered substances classified as PBT or vPvB.

4. First-aid measures

4.1 4.1 Description of first-aid measures

General information:

No danger expected under normal conditions.

Inhalation:

No treatment needed under normal conditions of use. Seek medical advice in case of symptoms.

Skin contact:

Remove contaminated clothing. Rinse exposed skin with water and wash with soap if available. Seek medical advice for persistent irritation.

Eye contact:

Rinse thoroughly with water. Seek medical advice for persistent irritation.

Ingestion:

No treatment necessary unless a large quantity is swallowed. Seek medical advice in such a case.

Self-protection of the first responder:

First responders must wear suitable personal protective equipment as it is appropriate for the accident, the injury, and the environment.

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4.2 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. Swallowing may cause nausea, vomiting or diarrhoea.

4.3 Indication of any immediate medical attention and special treatment needed

Note for health care providers: Treat symptomatically.

5. Fire-fighting measures

Allow only rescue services to approach a fire.

5.1 Extinguishing substances

Foam, water spray or water mist. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing agents:

Do not use strong water jets.

5.2 Special hazards arising from the substance or mixture

Hazardous **combustion** products may include: A complex mixture of airborne solid and liquid particulates and gases including carbon monoxide. Unidentified organic and inorganic binders.

5.3 Advice for firefighters

Fire-fighting personnel must wear suitable personal protective equipment, including chemical-resistant protective gloves. If large-surface contact with spilled material may occur, a chemical protection suit is mandatory. In the vicinity of fire in small enclosed spaces, a self-contained breathing apparatus is mandatory. Select fire-fighting protective clothing complying with the relevant standards (EN 469 in Europe, for example).

6. Accidental release measures

Avoid contact with spilled or released material. See section 8 for personal protection equipment. **Observe all relevant national and international regulations.**

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 Personnel without emergency response training

Avoid contact with eyes and skin.

6.1.2 Trained emergency personnel

Avoid contact with eyes and skin.

6.2 Environment protection measures

Apply suitable containment measures to prevent environmental pollution. Entry into sewage, rivers or surface water drains can be prevented by damming with sand, earth or another suitable substance.

6.3 Methods and materials for containment and cleaning up

Danger of slipping in spilled oil. Clean up immediately to avoid accidents. Contain spillage by damming with sand, earth or another suitable substance. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose as per regulations.

Further instructions:

Inform the authorities of a large spill that cannot be contained.

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6.4 Reference to other sections

See Section 8 for more information regarding the selection of personal protection equipment. See Section 13 of this safety data sheet for information about the appropriate disposal.

7. Handling and Storage

General safety precautions:

Use ventilating equipment if there is a danger of inhaling vapour, mist or aerosol. The information provided with this data sheet should be used as the basis for a risk assessment of the local conditions, in order to determine suitable measures for the handling, storage and disposal of this product.

7.1 Precautions for safe handling:

Avoid prolonged or repeated contact with skin. Avoid inhaling vapours and/or mist. Wear safety shoes when handling barrels of the product and use suitable handling devices. Correctly dispose of any contaminated cleaning cloths or utensils to avoid the possibility of fire. Keep containers closed and store in a cool, well ventilated place. Use properly labelled and sealable containers.

Decanting:

This material is a potential static accumulator. During mass transport, always ensure proper earthing and correct equipotential bonding.

7.2 Conditions for safe storage, including any incompatibilities:

Store at room temperature.

Section 15 provides additional information regarding the legally binding packing and storage instructions for this product.

Recommended materials:

Use mild steel or high density polyethylene for containers or container linings.

Unsuitable materials:

PVC

7.3 Specific applications

Not required

Additional information:

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Storage class according to TRGS 510: 10

Fire hazard classification: B.

Shelf-life:

Lubricants should be stored under dry conditions and at a constant temperature. If the date on the canister/drum is exceeded this does not mean that the product cannot be used. However, its suitability must be checked. For questions in this context, please contact **your service partner**.

8. Limits of exposure and personal protective equipment

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

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8.1 Parameters to be monitored

Occupational exposure limits

Product	Source	Type	ppm	mg/m ³	Remarks
Mineral oil mist	ACGIH	TWA [inhalable fraction]	-	5	-

Biological exposition index (BEI)

No biological limits assigned.

PNEC-related information: No data available

Monitoring procedures:

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 occupational exposure level and the adequacy of exposure controls. Biological monitoring may be also suitable for some substances. A qualified person is required to apply validated methods for exposure measurement and an authorised laboratory must analyse the samples taken. The following lists some sources for recommended procedures regarding the monitoring of concentrations in air; if required, contact the suppliers for more information. National procedures may also be applicable.

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://hse.gov.uk/>

Institut für Arbeitsschutz der 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>

8.2 Exposition controls

General information:

The scope of protection and type of necessary checks varies depending on the potential exposure conditions. Workplace monitoring should be based on the assessment of the dangers of local conditions. Appropriate measures include: Adequate ventilation to control concentration in the air. High concentration can occur if the product is heated or sprayed or forms a mist.

Determine procedures for safe handling and maintaining protective measures. Train your employees in theory and practice regarding the hazards and protective measures as they are relevant for any routinely working with this product. Ensure appropriate selection, test and maintenance of equipment used in protective measures, for example, personal protective equipment, local exhaust air system. Shut down system before opening or servicing the equipment. Keep drains tightly sealed until disposal or recycling. Always comply with proven procedures for personal hygiene, such as washing hands after handling the material and before eating, drinking and/or smoking. Routinely wash or clean work clothing and protective equipment to remove contaminants. Dispose of contaminated clothing and shoes that cannot be cleaned. Practice good housekeeping.

Exposure limitation and monitoring at the workplace

Protective equipment:

This information is provided in compliance with the PPE Directive (Directive 89/686/EEC) and the standards of the European Standard Committee (CEN). Personal protection equipment (PPE) should meet national Standards.

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Eye protection:

Wear safety glasses or a full face shield according to EU standard EN166 if splashes are likely to occur.

Hand protection:

Where hand contact with the product may occur the use of gloves approved to relevant standards (according to, 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 gloves depend their use, such as frequency and duration of contact, and the chemical resistance of the glove material. Always consult glove suppliers. Replace contaminated gloves. Personal skin care is prerequisite for effective skin protection. Gloves should be worn on clean hands. Hands should be washed and dried thoroughly after gloves have been worn. It is recommended to use a perfume-free moisturising cream.

For continuous exposition, we recommend gloves with a penetration time of > 240 minutes, ideally > 480 minutes, if available. As a protection from short-term exposition, we recommend the same, although it is possible that gloves with this protection class may not be available. In this case, gloves with a reduced penetration time will be sufficient, if all care and replacement instructions are complied with. The thickness of the gloves does not necessarily provide information regarding their resistance against a specific chemical, because such depends on the exact composition of the glove material.

Body protection:

Normal work wear should provide sufficient skin protection.

Respiratory protection:

No respiratory protection is required under normal conditions. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If technical measures are unable to keep the pollution concentrations below critical limits, select suitable respiratory protection, taking into account the specific work conditions and applicable legal provisions. Consult the suppliers of respiratory protection devices. If standard filter system are suitable, you select the appropriate combination of filter and mask. Use a combination filter for particles and gas (boiling point >65°C, 149 °F to EN14387).

Thermal hazards:

Not applicable.

Environmental exposition controls

Minimise release to the environment. Environmental assessment is necessary to ensure local regulations are upheld. See Section 6 for more information regarding actions to be taken in the event of unintended exposition.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Light brown, liquid at room temperature
Odour: Light hydrocarbon aroma	
Odour threshold:	No data available
pH value:	Not applicable
Initial boiling point and boiling range:	> 280°C / 536°F estimated
Pour point:	Typically – 33 °C / -27 °F
Flash point:	Typically 230 °C / 446 °F (COC)
Upper/lower combustibility or explosion limits:	Typically 1-10% (V) (mineral oil basis)
Auto-ignition temperature:	> 320 °C / 608 °F
Vapour pressure:	< 0.5 Pa at 20 °C / 68 °F (estimated)
Relative density:	Typically 0.875 at 15° C / 59 °F
Density:	Typically 875 kg/m ³ at 15° C / 59 °F
Solubility in water:	Negligible
Solubility in solvents:	No data available
Partition coefficient n-octanol/water:	> 6 (based on comparable product)
Dynamic viscosity:	No data available

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Kinematic viscosity:..... Typically 46 mm²/s at 40 °C / 104 °F
Vapour density Air=1) > 1 (estimated)
Evaporation rate (nBuAc=1): No data available
Decomposition temperature:..... No data available
Flammability:..... No data available
Oxidising properties:..... No data available
Explosive properties:..... Not classified

9.2 Further information

Electrical conductivity:
It is not expected that this material is a static accumulator.

Other Information:..... No volatile organic components
Volatile organic compounds:..... 0%

10. Stability and reactivity

10.1 Reactivity

Except for the reactivity-caused hazards shown in the following sub-section, this product does not pose any further risks of this nature.

10.2 Chemical stability

Hazardous reactions are not expected if the material is handled and stored according to the regulations.

10.3 Potential of dangerous reactions:

Reacts with oxidising agents

10.4 Conditions to avoid:

Extreme temperatures and direct sunlight.

10.5 Incompatible materials:

Strong oxidants.

10.6 Hazardous decomposition products:

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

11. Toxicological information

11.1 Information on toxicological effects

Basis for assessment:

Information given is based on a knowledge of the components and the toxicology of similar products. If not indicated differently, the data presented apply to the product in its entirety and not for individual components.

Potential exposure paths:

Skin and eye contact are the main exposure paths, however, accidental ingestion may also occur.

Acute oral toxicity:

Expected to be of low toxicity: LD50 > 5,000 mg/kg, rat

Acute dermal toxicity:

Expected to be of low toxicity: LD50 > 5,000 mg/kg, rabbit

Acute inhalation toxicity:

Not considered to be an inhalation hazard under normal conditions of use.

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Skin decomposition, irritation:

Slightly irritating.

Serious injury or irritation of the eyes:

Slightly irritating.

Respiratory irritation:

Inhaling vapours or mist can cause irritation.

Sensitisation of airways or skin:

Regarding airways or skin sensitization: Presumably not a sensitizer.

Aspiration hazard:

Not considered to be an aspiration hazard.

Mutagenicity:

Not considered to be a mutagenic hazard.

Carcinogenicity:

No formation of cancer (estimated). Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are considered non-carcinogenic by the International Agency for Research on Cancer.

Product	Carcinogenicity classification
Highly refined mineral oil (IP346 <3%)	ACGIH Group A4: Not classified as "carcinogenic in humans".
Highly refined mineral oil (IP346 <3%)	IARC 3: Not classified as "carcinogenic in humans".
Highly refined mineral oil (IP346 <3%)	GHS / CLP: Not classified as carcinogenic.

Reproductive and developmental toxicity:

No danger expected.

Summary of the assessment of CMR properties

Carcinogenicity:

This product does not meet the criteria for a classification in the categories 1A/1B.

Mutagenicity:

This product does not meet the criteria for a classification in the categories 1A/1B.

Reproduction toxicity (fertility):

This product does not meet the criteria for a classification in the categories 1A/1B.

Specific target organ toxicity (single exposure):

No danger expected.

Specific target organ toxicity (repeated exposure):

No danger expected.

Additional information:

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.

Classifications by other authorities according to different regulations may exist.

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12. Ecological information

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. **If not indicated differently, the data presented apply to the product in its entirety and not for individual components.**

12.1 Toxicity

Acute toxicity:

Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 >100 mg/l (to aquatic organisms). LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

12.2 Persistence/degradability

Not expected to be readily biodegradable. Major constituents are expected to be inherently biodegradable but the product contains components that may persist in the environment.

12.3 Bio-accumulative potential

Contains components with the potential to bioaccumulate.

12.4 Mobility in soil

Remains liquid. Immobilised by absorption in earth particles. **Floats** on water.

12.5 Results of PBT and vPvB assessment

This mixture does not contain REACH-registered substances classified as PBT or vPvB.

12.6 Other adverse effects

Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. Notes on disposal

13.1 Waste treatment methods

Product disposal:

Recover or recycle where possible. It is the responsibility of the waste creator to establish the toxicity and physical characteristics of the materials in order to classify the waste and establish the correct method of disposal in accordance with the applicable regulations. Do not allow to escape to the environment or into sewers or drains.

Container disposal:

Dispose of the material in accordance with the existing regulation, using a **certified disposal specialist** whose suitability has been verified in advance.

National regulations:

Disposal **must** be in accordance with regional, national and local laws and regulations.

EU waste code number: 13 02 05* non-chlorinated machine and gear oils and lubricants based on mineral oil.

Classification of waste is always the responsibility of the end user.

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14. Transport Information

Road and rail (ADR/RID)

ADR

This product is classified as harmless for the following types of transport: Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

RID

This product is classified as harmless for the following types of transport: Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

Transport on domestic waterways (ADN):

This product is classified as harmless for the following types of transport: Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

CDNI Convention on the Collection, Deposit and Reception of Waste produced during Navigation on the Rhine and Inland Waterways: NST 3411 Mineral oil lubricants

Sea transport (IMDG code)

This product is classified as harmless for the following types of transport: Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

Air transport IATA:

This product is classified as harmless for the following types of transport: Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

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

Contamination category:	Not applicable
Vessel type:	Not applicable
Product name:	Not applicable
Special measures:	Not applicable

Additional information: For bulk transport on water, comply with the provisions provided in MARPOL Annex 1.

15. Regulatory Information

The regulatory information is not intended to be comprehensive. Other regulations may also apply to the product.

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

Other information for regulation purposes

Authorisation and/or restriction of use: The product is not subject to approval by REACH.

Limitations of use

Recommended limitations of use (prohibitions): Without prior consultation with the supplier, this product may not be used for any other applications as the ones recommended in Section 1.

Local inventories

EINECS: All components listed or exempt (polymer).

TSCA: All components listed.

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National regulations (Germany):

Water hazard class: WGK 1 – slightly hazardous to water (Annex 4, VwVwS, Preparations)

Other Information: Technical Instructions on Air Quality: Product not listed by name. Comply with section 5.2.5 in connection with section 5.4.9.

15.2 Chemical safety assessment

The manufacturer has not performed a chemical safety assessment for this substance or mixture.

16. Other Information

Not classified

CLP Hazard notes:

H304 Swallowing and entering the airways can be lethal.

Additional information

This safety data sheet has no appendix dealing with potential exposition. The subject is a non-classified mixture containing hazardous substance according to Section 3. Relevant information regarding exposition scenarios for the hazardous components have been inserted in the main sections 1 through 16 of this safety data sheet.

Other Information

Legend to the abbreviations used in this safety data sheet

Acute toxicity	Acute toxicity
Asp. Tox.	Aspiration hazard
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Danger to the aquatic environment – long-term danger
Eye dam.	Severe eye damage/irritation:
Flam. Liq.	Flammable liquids
Skin Corr.	Caustic/irritating effects on the skin
Skin sens.	Sensitisation of the skin
STOT SE	Specific target organ toxicity (single exposure)
STOT RE	Specific target organ toxicity (repeated exposure)

The standard abbreviations and acronyms used in this document can be found in relevant reference literature (such as scientific dictionaries) or websites.

ADN	European Agreement concerning the international carriage of dangerous goods by inland waterways (ADN)
DFG	German Research Foundation
EG	European Community
EN	European standard
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ISO	International Standards Organisation
MAK	Maximum workplace concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Limit value for exposure at the workplace
PPE	Personal Protective Equipment
TRGS	Technical rules for dangerous goods
VO	Ordinance
VOC	Volatile organic compounds
VwVwS	German Regulation on Substances Hazardous to Water
WGK	Water Hazard Class
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement on the international transport of hazardous goods by road

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AICS	Australian List of Chemical Substances
ASTM	American Society for Material Testing
BEL	Biological exposure limit
BTEX	benzene, toluene, ethyl benzene, xylene
CAS	Chemical Abstracts Service
CEFIC	Trade association of the European chemical industry
CLP	Classification, Labelling and Packaging of Chemicals
COC	Flashpoint test according to Cleveland open cup method
DIN	German Standards Institute
DMEL	Derived minimum effect level
DNEL	Exposure concentration without effects
DSL	Canadian inventory of domestic substances
EC	European Commission
EC50	Effective concentration 50
ECETOC	European Centre for ecotoxicology and the toxicology of chemicals
ECHA	European Chemicals Agency
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective level 50
ENCS	Japanese inventory of existing and new chemicals
EWG	European waste code
GHS	Globally harmonised system for the classification and labelling of chemical substances
IARC	International cancer research centre
IATA	International Air Transport Association
IC50	Inhibitor concentration 50
IL50	Inhibitor level 50
IMDG	International Maritime Dangerous Goods
INV	Chinese chemicals list
IP346	"Institute of Petroleum" (IP) Test method No. 346 Determination of polycyclic aromatics DMSO extractable
KECI	Korean inventory of existing chemicals (KECI):
LC50	Lethal concentration 50
LD50	Lethal dose 50
LL/EL/IL	Lethal load, exposure limit, inhibition limit
LL50	Lethal level 50
MARPOL	International Convention for the Prevention of Pollution From Ships
NOEC/NOEL	Maximum dose or exposure concentration of a substance without observed effects
OE_HP	Occupational Exposure – High Production Volume
PBT	Persistent, Bioaccumulating, Toxic
PICCS	Philippine inventory of chemicals and chemical substances
PNEC	Predicted no-effect concentration
REACH	Registration, Evaluation, Authorisation and restriction of CHemicals
RID	Regulation Relating to International Carriage of Dangerous Goods by Rail
SKIN_DES	Skin Designation (identification for the avoidance of absorption by skin)
STEL	Short term exposure limit
TRA	Targeted risk analysis
TSCA	US Toxic Substances Control Act
TWA	Time-weighted average
vPvB	very persistent and very bioaccumulative

Safety data sheet directive: Regulation 1907/2006/EC (REACH), changed with Regulation (EU) No. 453/2010.

The information in this safety data sheet is based on current knowledge and experience and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not, therefore, be construed as a guarantee of any specific property of the product.