

## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. **Product identifier:**  
**A.Z. Meisterteile chain lube**
- 1.2. **Relevant identified uses of the mixture and uses advised against:**  
Maintenance product. For industrial, consumer and professional use.  
Uses advised against: Uses other than the recommended uses.
- 1.3. **Details of the supplier of the safety data sheet:**  
Information about the distributor:  
**Unix Autó Kft.**  
1139 Budapest, Frangepán utca 55-57.  
Tel.: 00 36 1 270 8700
- 1.3.1. Responsible person: -  
E-mail: [info@unixauto.hu](mailto:info@unixauto.hu)
- 1.4. **Emergency telephone number:** Please fill in!

### SECTION 2: HAZARDS IDENTIFICATION

- 2.1. **Classification of the mixture:**  
Classification according to Regulation (EC) No 1272/2008 (CLP):  
Aerosols, Hazard Category 1 – H222; H229

**Hazard statements:**  
**H222** – Extremely flammable aerosol.  
**H229** – Pressurised container: May burst if heated.

- 2.2. **Label elements:**



**Hazard statements:**  
**H222** – Extremely flammable aerosol.  
**H229** – Pressurised container: May burst if heated.

**Precautionary statements:**  
**P102** – Keep out of reach of children.  
**P210** – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P211** – Do not spray on an open flame or other ignition source.  
**P251** – Do not pierce or burn, even after use.  
**P261** – Avoid breathing spray.  
**P271** – Use only outdoors or in a well-ventilated area.  
**P304 + P340** – IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P305 + P351 + P338** – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P410 + P412** – Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

**P501** – Dispose of contents/container as hazardous waste, in accordance with local/national/international regulations.

### 2.3. Other hazards:

#### **Data about the mineral oil:**

The inhalation of vapours in high concentration may irritate the respiratory tract. May cause gastrointestinal irritation, vomiting and diarrhoea if ingested.

High pressure injection under the skin may have serious consequences even if no symptoms of injuries can be observed.

The mineral oil floats on water, adsorbs into the soil particulates and loses its mobility.

The product does not contain PBT or vPvB substances.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances:

Not applicable.

### 3.2. Mixtures: Mixture of petroleum-based mineral oil and propellant.

Hazardous ingredients:

Description	CAS number	EC number / ECHA list number	REACH registration number	Conc. (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)		
					Pictogram, signal word code(s)	Hazard class and category code(s)	Hazard statement code(s)
<b>Propane**</b> Index number: 601-003-00-5	74-98-6	200-827-9	01- 2119486944-21	50-70	GHS02 GHS04 Danger	Flam. Gas 1 Press. Gas	H220 H280
<b>Butane*/**</b> Index number: 601-004-00-0	106-97-8	203-448-7	01- 2119474691-32		GHS02 GHS04 Danger	Flam. Gas 1 Press. Gas	H220 H280
<b>Isobutane**</b> Index number: 601-004-00-0	75-28-5	200-857-2	01- 2119485395-27		GHS02 GHS04 Danger	Flam. Gas 1 Press. Gas	H220 H280

\*: Substance having occupational exposure limit value.

\*\* : Propellant.

Mineral oils in the product contain less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London.

For the full text of hazard statements, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures:

#### INGESTION:

Measures:

- Not a likely route of exposure (aerosol product).
- If aerosol gets accidentally in the mouth or is ingested, it is prohibited to induce vomiting.
- Obtain medical attention.

#### INHALATION:

Measures:

- Take the victim into fresh air and provide rest.
- In case of respiratory irritation (coughing) or breathing difficulties, immediately call for a physician.
- If breathing has stopped, provide artificial respiration by trained personal.
- In case of cardiac arrest, provide CPR.
- Giving oxygen may have a positive effect but first obtain medical advice.

#### SKIN CONTACT:

Measures:

- Remove the contaminated, impregnated clothes immediately.

- Wash affected skin surface with lukewarm water and soap.
- Do not try to heat the affected skin area on site.
- Do not rub and do not apply dry heat.
- Carefully cut around the part of the clothing which has been stuck to the skin.
- Cover the affected skin surface with sterile bandage.
- Transport victim into a hospital as soon as possible.

**EYE CONTACT:**

Measures:

- Rinse eye thoroughly with plenty of running water, and continue to rinse for at least 15 minutes (keep eyelids apart).
- Remove contact lenses if present, and if it is easy to do.
- Do not try to apply heat.
- Cover both eyes with sterile bandage.
- Obtain medical attention.

**4.2. Most important symptoms and effects, both acute and delayed:**

**Data about the mineral oil:**

The inhalation of vapours in high concentration may irritate the respiratory tract. May cause gastrointestinal irritation, vomiting and diarrhoea if ingested.

High pressure injection under the skin may have serious consequences even if no symptoms of injuries can be observed.

**Data about the propellant:**

In higher concentration the propellant may cause asphyxia and can be of fatal consequences.

**4.3. Indication of any immediate medical attention and special treatment needed:**

Show this safety data sheet or the product's label to the physician.

No special antidote.

## SECTION 5: FIREFIGHTING MEASURES

**5.1. Extinguishing media:**

**5.1.1. Suitable extinguishing media:**

Water spray, carbon dioxide, alcohol-resistant foam.

**5.1.2. Unsuitable extinguishing media:**

Strong water jet (may only be used to cool containers).

**5.2. Special hazards arising from the substance or mixture:**

Extremely flammable aerosol.

Pressurised container: May burst if heated.

Gas may form explosive mixture with air.

The heat of fire may cause a rapid increase of pressure inside the aerosol cans, which may explode.

In case of fire, smoke and other combustion products (carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes, soot) may be formed; the inhalation of such combustion products can have serious adverse effects on health.

**5.3. Advice for firefighters:**

Evacuate the surroundings.

Extinguish from a safe distance or a protected location.

Avoid breathing hazardous vapours and toxic decomposition products.

The best method for extinguishing fires of flammable vapours is to stop gas escape before starting to extinguish. Release of larger quantities is not likely (aerosol can).

Remove personnel and substances that haven't caught on fire to safety.

Wear full protective clothing and self-contained breathing apparatus.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures:**

**6.1.1. For non-emergency personnel:**

Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

**6.1.2. For emergency responders:**

Remove unauthorized persons.

Remove all sources of ignition.

Provide adequate ventilation.

Avoid contact with skin and eyes.

Do not breathe the vapour/spray of the product.

Wear full protective clothing and self-contained breathing apparatus.

Warning! Product may present an explosion hazard if it reaches the sewage system.  
Spilled product presents a slipping hazard due to the oil content.

**6.2. Environmental precautions:**

Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately. Product may present an explosion hazard if it reaches the sewage system. Release of larger quantities is not likely (aerosol can).

**6.3. Methods and material for containment and cleaning up:**

Remove all sources of ignition.  
Stop leakage if this can be done without risk.  
Control the concentration of gases with the help of water spray.  
Close down the area until gases are dispersed.  
Dispose of waste according to relevant regulations.  
Use only non-sparking tools.

**6.4. Reference to other sections:**

For further and detailed information see Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling:**

Observe conventional hygiene precautions.  
Avoid breathing spray of the product, its contact with skin and eyes as well as its ingestion.  
Spilled product may cause spilling hazard.  
Do not eat, drink or smoke during use.

**Technical measures:**

Use only in a well-ventilated place.  
Use appropriate personal protection.

**Precautions against fire and explosion:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Observe precautions regarding pressurized containers.  
Use non-sparking ventilation system and explosion-proof and internally secured electronic devices.  
Extremely flammable aerosol.  
Pressurized container: May burst if heated.  
Do not expose to temperatures exceeding 50 °C.  
Do not expose to sunlight or radiant heat. Do not pierce or burn, even after use.  
Do not spray on naked flames or any incandescent materials.  
It is prohibited to refill the container.

**7.2. Conditions for safe storage, including any incompatibilities:**

**Technical measures and storage condition:**

Provide adequate ventilation.  
Take measures to prevent electrostatic charges.  
Store in a dry and cool place, at temperatures below 35 °C.  
Keep out of the reach of children.  
Store separated from food.  
Do not use towels which have previously been used to clean-up. Do not put the contaminated rags into your pocket.

**Incompatible materials:** See Section 10.5

**Packaging material:** No special prescriptions.

**7.3. Specific end use(s):**

See Section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters:**

**Occupational exposure limit values** (United Kingdom, EH40/2005 (Fourth Edition 2020)):

**Butane** (CAS: 106-97-8):

Long-term exposure limit (8-hr TWA reference period): 600 ppm; 1450 mg/m<sup>3</sup>

Short-term exposure limit (15-minute reference period): 750 ppm; 1810 mg/m<sup>3</sup>

DNEL values		Oral exposure		Dermal exposure		Inhalative exposure	
		Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)
Consumer	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data
Worker	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data

PNEC values		
Compartment	Value	Note(s)
Freshwater	no data	no notes
Marine water	no data	no notes
Freshwater sediment	no data	no notes
Marine water sediment	no data	no notes
Sewage Treatment Plant (STP)	no data	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	no data	no notes

## 8.2. **Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

### 8.2.1. **Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use the product with adequate ventilation.

### 8.2.2. **Individual protection measures, such as personal protective equipment:**

Keep away from food, beverages and animal feed.

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke during use.

The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

- Eye/face protection:** If the risk of eye contact occurs, use appropriate protective glasses with side shields or face protection (EN 166).
- Skin protection:**
  - Hand protection:** Use appropriate protective gloves (EN 374). Suitable material: Nitrile rubber.
  - Other:** If the risk of direct contact or splashing occurs, use appropriate protective clothing.
- Respiratory protection:** Provide adequate, non-sparking ventilation (general ventilation, local exhaust). Use appropriate respiratory protective device if occupational exposure limit values may be exceeded.
- Thermal hazards:** No thermal hazards known.

### 8.2.3. **Environmental exposure controls:**

Prevent the product and its waste from entering bodies of water, soil or the sewage system.

Observe local and national regulations concerning sewage treatment.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1. Information on basic physical and chemical properties:**

Parameter	Value / Test method / Remarks
1. Appearance:	yellowish brown aerosol
2. Odour:	oily odour
3. Odour threshold:	no data*
4. pH:	not applicable
5. Melting point/freezing point:	-187.6 – -138.3 °C (propellant)
6. Initial boiling point and boiling range:	-104 – 160 °C (propellant)
7. Flash point:	260 °C (Cirkan C 220, ISO 25952)
8. Evaporation rate:	no data*
9. Flammability (solid, gas):	extremely flammable aerosol
10. Upper/lower flammability or explosive limits:	no data*
11. Vapour pressure:	≤ 1600 kPa (70 °C, propellant)
12. Vapour density:	no data*
13. Relative density:	no data*
14. Solubility(ies):	not soluble in water 24.4-60.4 mg/l (propellant)
15. Partition coefficient: n-octanol/water:	> 6 (Cirkan C 220)
16. Auto-ignition temperature:	287-537 °C (propellant)
17. Decomposition temperature:	no data*
18. Viscosity:	220 mm <sup>2</sup> /s (40 °C, Cirkan C 220, ISO 3104)
19. Explosive properties:	see other information below 5-15 vol. % (propellant, literature data)
20. Oxidizing properties:	no data*

**9.2. Other information:**

Density: ≥ 0.505 g/cm<sup>3</sup> (50 °C, propellant)

0.879 g/cm<sup>3</sup> (15 °C, Cirkan C 220, ISO 3675)

\*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet.

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:**

No reactivity known.

**10.2. Chemical stability:**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions:**

Product vapours may form explosive mixture with air which is heavier than air.

**Data about the propellant:**

Contact with strong oxidizing agents (peroxides, chromates etc.) may cause fire hazard.

**10.4. Conditions to avoid:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Pressurized container. Do not open, crash or pierce. Do not expose to temperatures exceeding 50 °C. Do not expose to sunlight or radiant heat. Do not pierce or burn, even after use. Do not spray in naked flames or on any incandescent materials. It is prohibited to refill the container.

**10.5. Incompatible materials:**

Strong bases, oxidizing agents.

**Data about the propellant:**

May form explosive mixture with nitrates and other oxidizing agents (e.g. chlorates, perchlorates, liquid oxygen).

**10.6. Hazardous decomposition products:**

In case of fire toxic gases may be formed (carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes, soot).

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects:**

**Acute toxicity:** Based on available data, the classification criteria are not met.

**Skin corrosion/irritation:** Based on available data, the classification criteria are not met.  
**Serious eye damage/irritation:** Based on available data, the classification criteria are not met.  
**Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.  
**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.  
**Carcinogenicity:** Based on available data, the classification criteria are not met.  
**Reproductive toxicity:** Based on available data, the classification criteria are not met.  
**STOT-single exposure:** Based on available data, the classification criteria are not met.  
**STOT-repeated exposure:** Based on available data, the classification criteria are not met.  
**Aspiration hazard:** Based on available data, the classification criteria are not met.

**11.1.1. Summaries of the information derived from the test conducted:**

No data available.

**11.1.2. Relevant toxicological properties:**

**Acute toxicity:**

No toxicological data is available regarding the mixture.

Data about the ingredients:

**Data about the mineral oil:**

The inhalation of vapours in high concentration may irritate the respiratory tract. May cause gastrointestinal irritation, vomiting and diarrhoea if ingested.

High pressure injection under the skin may have serious consequences even if no symptoms of injuries can be observed.

Mineral oils in the product contain less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London.

**Data about the propellant:**

Propane:

Inhalation (rat): 1443 mg/l (literature data)

Butane:

Inhalation (rat): 658 mg/l (literature data)

Isobutane:

Inhalation (mouse): 974 mg/l (literature data)

**Further effects:**

Data about the ingredients:

**Data about the mineral oil:**

Characteristic skin injuries (oil blisters) may be formed in case of long-term or repeated exposure (contact with contaminated clothes).

**11.1.3. Information on likely routes of exposure:**

Inhalation, skin contact, eye contact.

**11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:**

**Data about the mineral oil:**

The inhalation of vapours in high concentration may irritate the respiratory tract. May cause gastrointestinal irritation, vomiting and diarrhoea if ingested.

High pressure injection under the skin may have serious consequences even if no symptoms of injuries can be observed.

**Data about the propellant:**

In higher concentration the propellant may cause asphyxia and can be of fatal consequences.

**11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:**

No data available.

**11.1.6. Interactive effects:**

No data available.

**11.1.7. Absence of specific data:**

No information.

**11.1.8. Other information:**

No data available.

## SECTION 12: ECOLOGICAL INFORMATION

**12.1. Toxicity:**

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

Do not let the product into bodies of water, the sewage system or the soil.

Data about the ingredients:

**Data about the propellant:**

Propane:

LC50 (fish): 49.47 mg/l (literature data)  
LC50 (other aquatic organisms): 27.14 mg/l (literature data)  
EC50 (algae): 11.89 mg/l/72h (literature data)  
Butane:  
LC50 (fish): 24.11 mg/l (literature data)  
LC50 (other aquatic organisms): 14.22 mg/l (literature data)  
EC50 (algae): 7.71 mg/l/96h (literature data)  
Isobutane:  
LC50 (fish): 27.89 mg/l (literature data)  
LC50 (other aquatic organisms): 16.33 mg/l (literature data)  
EC50 (algae): 89.57 mg/l/96h (literature data)

**12.2. Persistence and degradability:**

No data available.

**12.3. Bioaccumulation potential:**

No data available about the product.

Data about the ingredients:

**Data about the propellant:**

Propane:

log Kow: 1.09-2.8 (literature data)

Butane:

log Kow: 1.09-2.8 (literature data)

Isobutane:

log Kow: 1.09-2.8 (literature data)

**12.4. Mobility in soil:**

No data available.

**12.5. Results of PBT and vPvB assessment:**

The product does not contain PBT or vPvB substances.

**12.6. Other adverse effects:**

The mineral oil floats on water, adsorbs into the soil particulates and loses its mobility.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods:**

Disposal according to the local regulations.

**13.1.1. Information regarding the disposal of the product:**

Dispose of in accordance with applicable regulations.

**List of Waste Code:**

**16 05 04\*** gases in pressure containers (including halons) containing hazardous substances

\*: Hazardous waste.

**13.1.2. Information regarding the disposal of the packaging:**

Dispose of in accordance with applicable regulations.

**13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:**

No data available.

**13.1.4. Sewage disposal:**

No data available.

**13.1.5. Special precautions for any recommended waste treatment:**

No data available.

## SECTION 14: TRANSPORT INFORMATION

**14.1. UN Number:**

ADR/RID: UN 1950

**14.2. UN proper shipping name:**

ADR/RID: AEROSOLS, flammable

**14.3. Transport hazard class(es):**

Class: 2

Classification code: 5F

Label: 2.1



Tunnel restriction code: (B/D)

Limited quantities (LQ): 2

**14.4. Packing group:**

No packing group.

**14.5. Environmental hazards:**

No relevant information.

**14.6. Special precautions for user:**

No relevant information.

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code:**

Not applicable.

## SECTION 15: REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**REGULATION (EC) No 1907/2006** OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

**REGULATION (EC) No 1272/2008** OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

**COMMISSION REGULATION (EU) No 2015/830** of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

**COMMISSION DIRECTIVE (EU) No 2013/10** of 19 March 2013 amending Council Directive (EEC) No 75/324 on the approximation of the laws of the Member States relating to aerosol dispensers

**15.2. Chemical safety assessment:** The distributor has not performed a chemical safety assessment.

## SECTION 16: OTHER INFORMATION

**Information regarding the revision of the safety data sheet:** No information.

**Literature references / data sources:**

Safety data sheet issued by the manufacturer (07. 05. 2020, version 1/HU).

**Methods used for the classification according to Regulation (EC) No 1272/2008:**

Classification	Method
Aerosols, Hazard Category 1 – H222; H229	Based on test methods (test data)

**Relevant hazard statements (code and full text) of Sections 2 and 3:**

**H220** – Extremely flammable gas.

**H222** – Extremely flammable aerosol.

**H229** – Pressurised container: May burst if heated.

**H280** – Contains gas under pressure; may explode if heated.

**Training advice:** No data available.

**Full text of the abbreviations in the safety data sheet:**

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.  
AOX: Adsorbable organic halides.  
BCF: Bioconcentration factor.  
BOD: Biological Oxygen Demand.  
CAS number: Chemical Abstract Service number.  
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
CMR effects: Carcinogenic, mutagenic, reprotoxic effects.  
COD: Chemical Oxygen Demand.  
CSA: Chemical Safety Assessment.  
CSR: Chemical Safety Report.  
DNEL: Derived-No-Effect-Level.  
ECHA: European Chemical Agency.  
EC: European Community.  
EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).  
EEC: European Economic Community.  
EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
ELINCS: European List of Notified Chemical Substances.  
EN: European Norm.  
EU: European Union.  
EWC: European Waste Catalogue (replaced by LoW – see below).  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.  
IATA: International Air Transport Association.  
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
IMDG: International Maritime Dangerous Goods.  
IMSBC: International Maritime Solid Bulk Cargoes.  
IUCLID: International Uniform Chemical Information Database.  
IUPAC: International Union of Pure and Applied Chemistry.  
Kow: n-Octanol - Water Partition Coefficient.  
LC<sub>50</sub>: Lethal concentration resulting in 50 % mortality.  
LD<sub>50</sub>: Lethal dose resulting in 50 % mortality (median lethal dose).  
LoW: List of Waste.  
LOEC: Lowest Observed Effect Concentration.  
LOEL: Lowest Observed Effect Level.  
NOEC: No Observed Effect Concentration.  
NOEL: No Observed Effect Level.  
NOAEC: No Observed Adverse Effect Concentration.  
NOAEL: No Observed Adverse Effect Level.  
OECD: Organization for Economic Cooperation and Development.  
OSHA: Occupational Safety and Health Administration.  
PBT: Persistent, Bioaccumulative and Toxic.  
PNEC: Predicted No Effect Concentration.  
QSAR: Quantitative Structure Activity Relationship.  
REACH: Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.  
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.  
SCBA: Self Contained Breathing Apparatus.  
SDS: Safety Data Sheet.  
STOT: Specific Target Organ Toxicity.  
SVHC: Substances of Very High Concern.  
UN: United Nations.  
UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.  
VOC: Volatile Organic Compound.  
vPvB: very Persistent and very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.

The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.

Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.  
It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.