

# Material safety data sheet SDS

# According to EU Regulation 1907/2006 in the current version

#### PENTYLENE GLYCOL NAT

#### 1. Identification of the substance/mixture and company

Product name/trade name:

INCI

REACH

Uses:

Pentylene Glycol

Pentylene Glycol

01-2119491291-39-xxxx

Cosmetic Ingredient

Supplier company identification: Elemental SRL, Piaţa Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania

Tel/Fax: +40259-436.755, www.ellemental.com

Emergency: RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate

Publică București.

International emergency number: +49 180 2273-112

#### 2. Hazards Identification

#### 2.1 Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1

H318

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2 Label elements

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

Hazard pictograms (CLP):GHS05

Signal word (CLP):Danger

Hazard statements (CLP):

H318 - Causes serious eye damage.

Precautionary statements (CLP):

P280 - Wear protective gloves, protective clothing, face protection, eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER, a doctor.

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

#### 3. Declaration of ingredients



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3.1 Substances

Pentylene Glycol CAS no. 5343-92-0 EC no. 226-285-3 100% Classification according to Regulation (EC) No. 1272/2008 [CLP] Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

3.2 Mixtures
Not applicable

#### 4. First aid measures

# 4.1. Description of first aid measures

First-aid measures general:

Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation:

Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact:

Wash skin with plenty of water.

First-aid measures after eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion:

Call a poison center or a doctor if you feel unwell. If swallowed, seek medical advice immediately and show this container or label.

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

Symptoms/effects after eye contact: Serious damage to eyes.

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

Treat symptomatically.

# 5. Fire fighting measures

# 5.1. Extinguishing media

Water, carbon dioxide, foam, dry powder

5.2. Special hazards arising from the substance or mixture

None known. Avoid inhalation of smoke or fumes, may produce CO (carbon monoxide) and CO2 (carbon dioxide).

5.3. Advice for firefighters

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Use self-contained breathing apparatus and chemically protective clothing. Do not dispose of fire-fighting water in the environment. Use water spray or fog for cooling exposed containers.

#### 6. Accidental release measures



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## 6.1. Personal precautions, protective equipment and emergency procedures

General measures:

Do not handle until all safety precautions have been read and understood.

6.1.1. For non-emergency personnel

Protective equipment:

Wear recommended personal protective equipment.

Emergency procedures:

Ventilate spillage area. Avoid contact with skin and eyes. Evacuate area.

6.1.2. For emergency responders

Protective equipment:

Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Emergency procedures:

Stop leak if safe to do so. Evacuate unnecessary personnel

6.2. Environmental precautions

Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Do not allow to enter drains or water courses. 6.3. Methods and material for containment and cleaning up

For containment:

For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Solid spill: wet with water or cover with foam.

Methods for cleaning up:

Take up liquid spill into absorbent material. This material and its container must be disposed of in a safe way, and as per local legislation.

Other information:

Dispose of materials or solid residues at an authorized site. 6.4. Reference to other sections For further information refer to section 8 and section 13.

## 7. Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling:

Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Ensure that there is a suitable ventilation system. Always wash hands after handling the product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only in well ventilated areas. Do not eat, drink or smoke during work.

Hygiene measures:

Do not eat, drink or smoke when using this product. Always wash hands after handling the product. 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:

Store in a well-ventilated place. Keep cool. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity. Keep only in the original container in a cool, well-ventilated place.

Storage temperature: 5-25 °C



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# 8. Exposure controls / personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC PENTYLENE GLYCOL (5343-92-0)

DNEL/DMEL (Workers)

Acute - systemic effects, dermal 25 mg/kg bodyweight/day

Acute - systemic effects, inhalation 35.2 mg/m³
Acute - local effects, dermal 2.02 mg/cm²

Long-term - systemic effects, dermal 25 mg/kg bodyweight/day

Long-term - local effects, dermal 2.02 mg/cm<sup>2</sup> Long-term - systemic effects, inhalation 17.6 mg/m<sup>3</sup>

DNEL/DMEL (General population)

Acute - systemic effects, dermal 12.5 mg/kg bodyweight/day

Acute - systemic effects, inhalation 8.8 mg/m<sup>3</sup>

Acute - systemic effects, oral 1.25 mg/kg bodyweight/day

Acute - local effects, dermal 1.1 mg/cm<sup>2</sup>

Long-term - systemic effects, oral 1.25 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 4.4 mg/m<sup>3</sup>

Long-term - systemic effects, dermal 12.5 mg/kg bodyweight/day

Long-term - local effects, dermal

PNEC (Water)

PNEC aqua (freshwater) 0.5 mg/l
PNEC aqua (marine water) 0.05 mg/l
PNEC aqua (intermittent, freshwater) 5 mg/l

PNEC (Sediment)

PNEC sediment (freshwater) 1.85 mg/kg dwt
PNEC sediment (marine water) 0.185 mg/kg dwt

PNEC (Soil)

PNEC soil 0.0764 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant 5500 mg/l

8.1.5. Control banding

No additional information available 8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

1.1 mg/cm<sup>2</sup>



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Ensure good ventilation of the work station. Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. Chemical goggles or face shield with safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. Use chemically protective clothing

Hand protection:

Protective gloves. Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent). Nitrile rubber gloves. Permeation 3 (> 60 minutes). Layer thickness: 0,12 mm. Esters: Butyl-rubber protective gloves > 120 min (ISO 374-1)

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. With filter for particulates/vapors/gases. Full-/Half-/quarter-face masks (DIN EN 136/140). In case of inadequate ventilation wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

## 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state : Liquid
Colour : Colourless.
Molecular mass : 104.15 g/mol
Odour : odourless.
Odour threshold : Not available
Melting point : -40 °C

Freezing point : -30 °C 1013 hPa.

Boiling point : 206 °C 1013 hPa.

Flammability : Not relevant

Explosive limits : Not available

Lower explosion limit : Not available



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Upper explosion limit : 9.3 vol %

Flash point : 105 °C 1013.3 hPa.

Auto-ignition temperature : 380 °C 1013.3 hPa.

Decomposition temperature : Not available

 pH
 :
 7 - 8 (Water: 500 g/l, 20 °C).

 Viscosity, kinematic
 :
 24 mm²/s 40°C. 79.4 mm²/s. 20°C.

 Viscosity, dynamic
 :
 22.9 mPa·s 40°C. 77.1 mPa·s. 20°C.

Solubility : Water: 1000 g/l 20°C.

Partition coefficient n-octanol/water (Log Kow) : 0.06 (25°C).

Partition coefficient n-octanol/water (Log Pow) : 0.06 (at 25 °C)

Vapour pressure : Not determined

Vapour pressure at 50°C : Not available

Density :  $0.966 - 0.976 \text{ g/cm}^3 20^{\circ}\text{C}$ .

Relative density : Not available
Relative vapour density at 20°C : Not available
Particle characteristics : Not applicable

#### 9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available 9.2.2. Other safety characteristics

VOC content: 980 g/I (VOCs, 2010/75/EU).

### 10. Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. 10.2. Chemical stability Stable under normal conditions. 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). 10.5. Incompatible materials

No additional information available 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

#### 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral):

Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (dermal):

Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation):

Not classified (Based on available data, the classification criteria are not met)



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LD50 oral rat> 5000 mg/kg bodyweight

LD50 dermal rat> 2000 mg/kg bodyweight

LC50 Inhalation - Rat

> 7.015 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

LC50 Inhalation - Rat (Dust/Mist)

> 7015 mg/l/4h

Skin corrosion/irritation:

Not classified (Based on available data, the classification criteria are not met)

pH: 7 – 8 (Water: 500 g/l, 20 °C). Serious eye damage/irritation: Causes serious eye damage. pH: 7 – 8 (Water: 500 g/l, 20 °C).

Respiratory or skin sensitisation:

Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity:

Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity:

Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity:

Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure:

Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure:

Not classified (Based on available data, the classification criteria are not met)

PENTYLENE GLYCOL (5343-92-0)

NOAEL (oral, rat, 90 days)

1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard:

Not classified (Based on available data, the classification criteria are not met)

PENTYLENE GLYCOL (5343-92-0)

Viscosity, kinematic

24 mm<sup>2</sup>/s 40°C. 79.4 mm<sup>2</sup>/s. 20°C.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties:

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

No additional information available



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#### 12. Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute):

Not classified

Hazardous to the aquatic environment, long-term (chronic):

Not classified

Not rapidly degradable

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LC50 - Fish [1]

> 1096 mg/l 96 h.

EC50 - Crustacea [1]

> 500 mg/l Test organisms (species): Daphnia magna

EC50 - Other aquatic organisms [1]

> 500 mg/l 48 h.

EC50 72h - Algae [1]

9334.69 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

ErC50 algae

9334.7 mg/l 72 h.

NOEC, fish

1096 mg/l (96 Hours)

ErC10, algae

5477.3 mg/l (72 Hours)

12.2. Persistence and degradability PENTYLENE GLYCOL (5343-92-0)

Biodegradation

42 % DOC 7days. DOC Removal.

12.3. Bioaccumulative potential PENTYLENE GLYCOL (5343-92-0)

Partition coefficient n-octanol/water (Log Pow) 0.06 (at 25 °C)

Partition coefficient n-octanol/water (Log Kow) 0.06 (25°C).

12.4. Mobility in soil PENTYLENE GLYCOL (5343-92-0)

Organic Carbon Normalized Adsorption Coefficient (Log Koc) 0

12.5. Results of PBT and vPvB assessment PENTYLENE GLYCOL (5343-92-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties:

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available



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#### 13. Disposal considerations

#### 13.1. Waste treatment methods

This material and its container should be disposed safely avoiding release to the environment. National and regional provisions that may be in force should be observed.

#### 14. Transport information

#### Land transport (ADR/RID)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.
- 14.5. Environmental hazards: ENVIRONMENTALLY HAZARDOUS: No
- 14.6. Special precautions for user: No dangerous good in sense of this transport regulation.
- 14.7. Maritime transport in bulk according to IMO instruments: No dangerous good in sense of this transport regulation.

#### 15. Regulatory information

#### 15.1.1. EU-Regulations

REACH Annex XVII (Restriction List) EU restriction list (REACH Annex XVII) Reference code Applicable on Entry title or description 3(b)

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Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

**REACH Annex XIV (Authorisation List)** 

Not listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)** 

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

VOC Directive (2004/42)

VOC content:980 g/I (VOCs, 2010/75/EU).

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances) 15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on the Canadian NDSL (Non-Domestic Substances List) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Japanese ENCS (Existing New Chemical Substances) inventory Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on the NCI (Vietnam - National Chemical Inventory)

Germany

Water hazard class (WGK):WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 1799). Storage class (LGK, TRGS 510):LGK 10 - Combustible liquids.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

#### 16. Additional information

16.1 Full text of H- and EUH-statements:

Eye Dam. 1 Serious eye damage/eye irritation, Category 1

H318 Causes serious eye damage.

The classification complies with: ATP 12



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#### 16.2 Abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR -Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Test-ing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regula-tion (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx -Loading rate associated with x% response; EmS - Emergen-cy Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration as-sociated with x% growth rate response; GHS - Globally Harmonized System; GLP -Good La-boratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - Interna-tional Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; INCI: International Nomenclature of Cosmetic Ingredients; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test popula-tion; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - Interna-tional Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Ef-fect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic sub-stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quanti-tative) Structure Activity Relationship; PNEC: Predicted No Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Re-striction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT -Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; STE: Short-term exposure; STEL: Short Term Exposure limit; STOT: Specific Target Organ Toxicity; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.