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

### 1.1. Product identifier:

**Substance name:** Heat Transfer Fluid ECO (Propylene Glycol), -25°C, ready to use.
**Substance manufacturer:** "CrossChem" Ltd.
**REACH Registration No.:** Not applicable for mixtures.
**CAS No.:** Not applicable for mixtures.
**EC No.:** Not applicable for mixtures.
**Index No.:** Not applicable for mixtures.

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

**Relevant identified uses:**

**SU21** – Consumer uses;
**SU22** – Professional uses;
**PC4** – Anti-Freeze and de-icing products;
**PC16** – Heat transfer fluids;
**PROC5** – Mixing or blending in batch processes;
**PROC8b** – Transfer of substance or mixture (charging and discharging) at dedicated facilities;
**PROC20** – Use of functional fluids in small devices;
**ERC7** – Use of functional fluid at industrial site;
**ERC9a** – Widespread use of functional fluid (indoor);
**ERC9b** – Widespread use of functional fluid (outdoor);
**ERC10a** – Widespread use of articles with low release (outdoor).

**Uses advised against:** Not applicable.
**Reason why uses advised against:** Not applicable.

### 1.3. Details of the Supplier of the safety data sheet:

**Manufacturer / Supplier:** "CrossChem" Ltd.;
**Street address / P.O. Box:** "Naftaluka", Olaines pagasts, Olaines novads, LV-2127, Latvia. (Office, factory, warehouse).
**National Registration No.:** 40003888244
**Telephone number:** +371 67491030 (Administration)
**E-mail:** info@crosschem.lv
**Homepage:** https://crosschem.lv/
**E-mail address of competent person, responsible for the SDS:** andris.matiss@crosschem.lv

### 1.4. Emergency telephone number:

State Fire and Rescue Service: **(+371) 112**
**Working hours:** 24 hours a day, 365 days a year.

National Toxicology Center: **(+371) 67042473; (+371) 67000610**
**Opening hours:** Working days from 8:00 to 17:00, weekends and public holidays from 9:00 to 15:30.
**Other notes:** Help is provided in Latvian, Russian and English languages.

## SECTION 2. Hazards identification.

### 2.1 Classification of the substance or mixture:

**Classification according to Regulation (EC) No. 1272/2008 (CLP):**
According to Regulation (EC) No. 1272/2008 (CLP), product does not need classification.

### 2.2 Label elements:

**Labelling according to Regulation (EC) No. 1272/2008 (CLP):**
According to Regulation (EC) No. 1272/2008 (CLP), product does not need labelling.

**Hazard pictograms:** Not applicable.
**Signal word:** Not applicable.
**Hazard statements:** Not applicable.
**Precautionary statements:** Not applicable.
**Supplemental Hazard information (EU):** If product contacts eyes, it may cause eye irritation.

**2.3. Other hazards:** Not applicable.

## SECTION 3. Composition / information on ingredients.

**3.1. Substance:** Not applicable.
**3.2. Mixtures:**

| Name of the substance | CAS No. | EC No. | REACH No. | Clasification according to (EC) No. 1272/2008. | W%/W |
|---|---|---|---|---|---|
| Water | 7732-18-5 | 231-791-2 | Not applicable. | Not applicable. | 45 – 55 % |
| Propylene glycol (Propane-1,2-diol) | 57-55-6 | 200-338-0 | 01-2119456809-23-XXXX | Not applicable. | 45 – 55 % |
| Sodium 2-ethylhexanoate | 19766-89-3 | 243-283-8 | 01-2119972937-17-XXXX | Repr. 2 (**H361** – Suspected of damaging fertility or the unborn child ); Skin Irrit. 2 (**H315** – Causes skin irritation); Eye Irrit. 2 (**H319** – Causes serious eye irritation). | <0.70 % |
| Methyl-1H-benzotriazole | 29385-43-1 | 249-596-6 | 01-2119979081-XXXX | Acute Tox 4. (**H302** – Harmful if swallowed); Aquatic Chronic 2 (**H411** – Toxic to aquatic life with long lasting effects); Eye Irrit. 2 (**H319** – Causes serious eye irritation). | <0.055 % |

## SECTION 4. First aid measures.

**4.1. Description of first aid measures:**

**General information:**
Remove contaminated, saturated clothing immediately. In case of accident or unwelness, seek medical advice immediately. Keep the victim calm. If the person is unconscious, place the person in stable recovery position. Consult a physician. Show this safety data sheet to the doctor in attendance.

**Following inhalation:**
If inhaled, remove the person from the hazardous area to fresh air. Lay down the person in a quiet place and protect him against hypothermia.If not breathing, give artificial resuscitation (CPR). If breathing is difficult, administer oxygen.
In every cases where there is doubt of person's life or if symptoms remain, seek medical advice.

**Following skin contact:**
Remove contaminated clothing and shoes. Wash the affected area thoroughly with soap and plenty of water. Wash clothing before reuse. After massive skin contact and long-term skin contamination or if irritation remains, seek medical advice.

**Following eye contact:**
Promptly flush eyes with water, continuing for at least 15 minutes, occasionally lifting the upper and lower eyelids, to ensure thorough rinsing. Remove contact lenses if possible and if safe to do. After rinsing eyes with water, rinse eyes with physiological saline solution (0.9% NaCl). If irritation, redness or blinking persists, consult a doctor immediately.

**Following ingestion:**
If the product has been swallowed, immediatly rinse mouth with water, do not induce vomiting. If the person is conscious have him/ her to drink 1 glass of water (200 ml) or better, if available: apply charcoal (3 tablespoons as a

suspension in a glass of water). Place the person in a stable lateral position. Keep affected person warm and treat for shock. Never introduce anything into the mouth of an unconscious person. If person feels unwell, seek medical advice.

**Self-protection of the first aider:**
Pay attention to self protection. Comply with general hygiene requirements. Avoid inhalation of mist and vapour. Product contact with eyes is prohibited. Avoid repeated or prolonged contact with skin or clothing. Wear suitable protective clothing and gloves.

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

**Eyes**: Weak to moderate irritation after direct contact with the product or with concentrated vapours/aerosols.
**Skin:** Slightly or mild irritation. Light reddening or no local reddening, rarely allergic reactions.
**Inhalation:** Due to high concentration of hot vapors/aerosol, slight irritation in the upper respiratory tract or respiratory disturbances may occour.
**Ingestion/resorption:** Low toxicity after acute ingestion. At high doses, metabolic disturbances may occur: nausea, vomiting or acidosis.
**CNS symptoms**: CNS effects such as depression, headache or unconsciousness may occur after high dose absorption.
**Other symptoms:** Not applicable.

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

**Notes to doctor:**
Treat Symptomatic (decontamination). In hospital, monitor cardiovascular, pulmonary and CNS functions as well acid base balance. Hematological parameters should be checked in serious cases.

## SECTION 5. Firefighting measures.

### 5.1. Extinguishing media:

**Suitable extinguishing media:**
Use the most efficient and the most suitable extinguishing agent for surroundings to extinguish the fire. All standard agents are acceptable: Water spray, water fog, chemical foam, alcohol resistent foam, dry fire powder and carbon dioxide ($CO_2$).
**Unsuitable extinguishing media:** Full water jet.

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

Heat from fire can generate flammable vapor. Vapors are heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. When mixed with air and exposed to ignition source, vapors can burn or explode in confined spaces.

**Hazardous combustion products:**
Carbon Monoxide (CO) and Carbon dioxide ($CO_2$) will be formed when burning as well as irritating fumes. Short-term expousures to smoke and gases may lead to irreversible lung injury without early signs of symptoms.

### 5.3. Advice for firefighters:

**Special protective equipment for fire-fighters:**
Do not enter fire area without proper protective equipment, including respiratory protection. When the potential chemical hazard is unknown, in enclosed or confined spaces, a selfcontained breathing apparatus should be worn (SCBA). During burning irritating and poisonous gases can be released, therefore use SCBA with a comprehensive facial mask, and protective fire-fighting clothing (including: fire helmet, overalls, pants, boots, gloves, eye and face protection.) must be worn.

Fire fighter's clothing conforming to European standard **EN469** provides a basic level of protection for chemical incidents and includes helmets, protective boots and gloves. Clothing not conforming to EN469 may not be suitable in any chemical incident. Use SCBA with a chemical protection suit only where personal (close) contact is likely to happen. Use SCBA with gas-tight suit when in close proximity to the substance or if vapors are likely to arise.

### 5.4. Additional information:

Stay down-wind during firefighting. Promptly isolate the scene by removing all unauthorized persons from the area of the incident if there is a fire. A pressure rise will occur if containers are exposed to heat, therefore evaporation of solution can result in rupture of container, container may burst. Cool containers with a cold water spray. If there is no risk, move the containers away from the heat source. Shut off sources of ignition. Stop spill/release if it can be done with minimal risk. Water mist may be useful in minimizing or dispersing vapors.

Do not release chemically contaminated water into drains, soil or surface water. Collect water used for extinguishing. Dispose of contaminated water and soil according to local regulations. Product is combustile, burns with difficulty. Although water soluble, may not be practical to extinguish fire by water dilution.

## SECTION 6. Accidental release measures.

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

**For non-emergency personnel:**

Put on appropriate protective equipment (see Section 8.). Consult an emergency expert. Eliminate sources of ignition, do not smoke. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering the area. Do not touch or walk through spilled material. The recommendations are the same as for emergency help providing staff.

**For emergency responders:**

Wear appropriate protective equipment (see Section 8.) to prevent contact with the substance and inhalation of fumes or mist. Ensure to supply adequate ventilation and fresh air in closed rooms. Eliminate sources of ignition and heat. Stop leak if possible. Isolate and evacuate the danger zone, reduce the presence of persons, who are not involved in the rescue operation.

### 6.2. Environmental precautions:

Avoid contact of large quantities with water courses. Do not allow large quantities of product to enter drains, surface waters, ground water, and in case of large accidental spill into the water supply, inform local authorities immediately. Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up:

**For containment:**

Ensure adequate ventilation is provided. Clogging or cover drains. In the event of a major leak, stop the flow of product and control spill travel by using: booms and pads, which can be found in spill kit, if it is safe to do. Scoop or pump off as much product as possible in to secure containers. Absorb remains in vermiculite, dry sand, silica gel or any non-combustile absorbent material, place the used absorbent in secure and suitable containers. After containing the substance, rinse the area with plenty of water.

In case of soil contamination, remove contaminated soil for remediation or disposal according to local regulations.
In case of product vapor leakage - apply water spray or mist to limitdistribution of vapors.

**For cleaning up:**

Dispose of the material collected in secure containers according to regulations in section 13. After containing spill, clean up remains by diluting with water and mop up. In the case of small spills, wipe the surface with suitable absorbent material, clean surface with water afterwards.

### 6.4. Other information:

See Section 8 for personal protective equipment and Section 13 for waste disposal.

## SECTION 7. Handling and storage.

### 7.1. Precautions for safe handling:

**Protective measures:**

Use only in dry, well ventilated areas. Handle opened container with care, close after use. Handle in accordance with good industrial hygiene and safety procedures. Avoid contact with the eyes. Avoid repeated or prolonged contact with skin when handling the product. Avoid inhalation of mist. Use appropriate protective equipment: protective clothing, gloves, goggles and respirator necessary (see Section 8.).

**Measures to prevent fire:**
Follow preventative fire protection regulations. Keep away from sources of spraks and ignition – do not smoke. Use only in well ventilated areas. Residue in empty containers can burn if heated. Containers should be thoroughly rinsed with clean water to reduce the risk of fire.

**Measures to prevent aerosol and dust generation:**
Avoid spraying in enclosed spaces. Avoid splashing of productwhen carrying or filling containers.

**Measures to protect the environment:**
When using, refilling or transfering a product at high temperatures, or if a large vapor concentration of product occours in enclosed areas, sufficient air ventilation systems should be provided. Check emission limit values, if the values are exceeded a purification of waste gases is necessary.

**Advice on general occupational hygiene**:
Provide adequate ventilation in areas where aerosol is formed. Avoid contact with eyes and skin. Provide easy access to water supply and eye wash facilities, show where to locate those. Wash your hands with mild soap and water after use, before breaks, at the end of the working day. Do not eat, drink or smoke when using the product and in areas where product is handled, stored and processed. “NO SMOKING” signs should be placed in the working area. Regular cleaning of equipment, work area and clothing is recommended. Use protective equipment while cleaning if necessary. Do not store with food, drink or animal food.

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

**Technical measures and storage conditions:**
Do not store close to heat sources, sparks or fire. Storage temperature – lowered temperature or ambient temperature, from -24°C up to +40°C. Protect containers against physical damage. Containers and pipelines have to be labelled clearly and permanently. Good general ventilation should be sufficient to control worker exposure to vapor. If this product exceeds exposure limits, use process enclosures: local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Packaging materials:**
Suitable packing material: Carbon/mild steel with suitable internal coating, stainless steel, aluminum, glass, polypropylene (PP), polytetrafluoroethylene (PTFE), polyfluoroethylene (PFE), polyvinylidene fluorides (PVDF), high density polyethylene (HDPE) and polyethylene (PE). As well as polypropylene copolymer (PPCO), polymethylpentane (PMP), polyethylene terephthalate copolymer (PETG) and teflon (TFE, PFA).
Non suitable packaging materials: Not applicable.

Product can be packed in the package chosen by the buying customer, as long as it ensures its resistibility, safe transportation and storage of the product.

**Requirements for storage rooms and vessels:**
Store product protected from direct sunlight in a dry, cool and well-ventilated area. Floors must be leak-proof and skid proof or covered with insulation material. It is recommended to use anti-spill container under the IBC containers or drums. Contact local authorities for further information on storage requirements.

Containers that have been opened must be carefully reinforced and kept upright to prevent leakage. Keep containers tightly closed when not in use. Keep containers protected from physical damage. Check regularly for leaks. Keep preferably in the original container. Do not remove the hazard labels of the containers (even if they are empty). Do not store in unlabeled containers.

**Storage class:** Storage class 10 (Combustible liquids as far as not in storage class 3).

**Further information on storage conditions:**
Product has a shelf life of 36 months, in unopened manufacturers packing, if stored in a cool and dry location and away from direct sunlight. Collocated storage with the following substances is prohibited: Pharmaceuticals, foods, animal feeds, infectious and radioactive substances, explosive substances, gases, strongly oxidizing substances of storage class 5.1A. Only products and substances of the same storage class should be stored together. Product is hygroscopic, protect from moisture.

**7.3. Specific end use(s):** Heat transfer fluid.

## SECTION 8. Exposure controls / personal protection.

### 8.1. Control parameters:

**Components with workplace control parameters:**

| Component | CAS No. | OEL 8h | Short term, 15 min | Base |
|---|---|---|---|---|
| Propylene glycol | 57-55-6 | 3 ppm; 7 mg/m³ | 3 ppm; 7 mg/m³ | Occupational health and safety requirements for exposure to chemicals at work spaces |
| Sodium 2-ethylhexanoate | 19766-89-3 | Not determined. | Not determined. | |
| Methyl-1H-benzotriazole | 29385-43-1 | Not determined. | Not determined. | |

**DNEL values of exposure to human health:**

The product is solution of propylene glycol and additives. DNEL of the product is not determined. The physicochemical properties of the pure propylene glycol DNEL, which could have the most negative effect, according to REACH dossier of propylene glycol, is provided. As product contains methyl-1H-benzotriazole and sodium 2-ethylhexanoate, DNEL values and physicochemical properties of methyl-1H-benzotriazole and sodium 2-ethylhexanoate is provided additionally.

| Mode of exposure | Type of exposure | DNEL value (workers) | DNEL value (public consumers) | The most negative physicochemical effect |
|---|---|---|---|---|
| Inhalation | Acute effect, systemic | (iii) | (iii) | Not applicable. |
| Inhalation | Acute effect, local | (iii) | (iii) | Not applicable. |
| Inhalation | Chronic effect, systemic | (Propylene glycol) 168 mg/m³; (Sodium 2-ethylhexanoate) 14 mg/m³; (Methyl-1H-benzotriazole) 8.8 mg/m³. | (Propylene glycol) 50 mg/m³; (Sodium 2-ethylhexanoate) 3.5 mg/m³; (Methyl-1H-benzotriazole) 4.4 mg/m³. | Repeated dose toxicity; Developmental toxicity. |
| Inhalation | Chronic effect, local | (Propylene glycol) 10 mg/m³ | (Propylene glycol) 10 mg/m³ | Repeated dose toxicity. |
| Dermal | Acute effect systemic | (iii) | (iii) | Not applicable. |
| Dermal | Acute effect, local | (iii) | (iii) | Not applicable. |
| Dermal | Chronic effect, systemic | (Sodium 2-ethylhexanoate) 2 mg/kg bw/day; (Methyl-1H-benzotriazole) 500 µg/kg bw/day. | (Sodium 2-ethylhexanoate) 1 mg/kg bw/day; (Methyl-1H-benzotriazole) 250 µg/kg bw/day. | Developmental toxicity; Repeated dose toxicity. |
| Dermal | Chronic effect, local | (iil) | (iii) | Not applicable. |
| Through eyes | Acute effect, local | (iii) | (iii) | Not applicable. |
| Oral | Acute effect, systemic | (ii) | (iii) | Not applicable. |
| Oral | Acute effect, local | (ii) | (iii) | Not applicable. |
| Oral | Chronic effect, systemic | (ii) | (Sodium 2-ethylhexanoate) 1 mg/kg bw/day; (Methyl-1H-benzotriazole) 250 µg/kg bw/day. | Teratogenicity; Repeated dose toxicity |

| | | | | |
|---|---|---|---|---|
| Oral | Chronic effect, local | (ii) | (Methyl-1H-benzotriazole) 250 µg/kg bw/day. | Repeated dose toxicity. |
| i) hazard identified but no DNEL available; ii) no exposure expected; iii) no hazard identified. | | | | |

**Predicted no effect contrentation values:**
PNEC of the product is not determined. PNEC of pure propylene glycol, according to REACH dossier of propylene glycol, is provided. PNEC values of methyl-1H-benzotriazole and sodium 2-ethylhexanoate are provided additionally.

| **Environmental protection target** | **PNEC value** |
|---|---|
| Fresh water | **Propylene glycol:** 260 mg/L; Periodic exposure – 183 mg/L.<br>**Sodium 2-ethylhexanoate:** 360 µg/L; Periodic exposure – 493 µg/L.<br>**Methyl-1H-benzotriazole:** 8 µg/L; Periodic exposure – 86 µg/L. |
| Freshwater sediments | **Propylene glycol:** 572mg/kg; Periodic exposure – PNEC value not available.<br>**Sodium 2-ethylhexanoate:** 301 µg/kg; Periodic exposure – PNEC value not available.<br>**Methyl-1H-benzotriazole:** 2.5 µg/kg; Periodic exposure – PNEC value not available. |
| Marine water | **Propylene glycol:** 26 mg/L; Periodic exposure – PNEC value not available.<br>**Sodium 2-ethylhexanoate:** 36 µg/L; Periodic exposure – PNEC value not available.<br>**Methyl-1H-benzotriazole:** 8 µg/L; Periodic exposure – PNEC value not available. |
| Marine sediments | **Propylene glycol:** 57.2 mg/kg; Periodic exposure – PNEC value not available.<br>**Sodium 2-ethylhexanoate:** 30.1 µg/kg; Periodic exposure – PNEC value not available.<br>**Methyl-1H-benzotriazole:** 2.5 µg/kg; Periodic exposure – PNEC value not available. |
| Food chain | (ii) |
| Microorganisms in sewage treatment | **Propylene glycol:** 20 mg/L; Periodic exposure – PNEC value not available.<br>**Sodium 2-ethylhexanoate:** 71.7 mg/L; Periodic exposure – PNEC value not available.<br>**Methyl-1H-benzotriazole:** 39.4 mg/L; Periodic exposure – PNEC value not available. |
| Soil (agricultural) | **Propylene glycol:** 50 mg/kg; Periodic exposure – PNEC value not available.<br>**Sodium 2-ethylhexanoate:** 57.9 µg/kg; Periodic exposure – PNEC value not available.<br>**Methyl-1H-benzotriazole:** 2.4 µg/kg; Periodic exposure – PNEC value not available. |
| Air | (ii) |
| i) hazard identified but no PNEC available; ii) no exposure expected; iii) no hazard identified. | |

### 8.2. Exposure controls:

**Appropriate engineering controls:**
Good general ventilation should be provided to control worker exposure to airborne contaminants of vapor or mists, especially in confined spaces. Adhere to good industrial hygine rules when using or handling the product. Provide access to water, hand-wash facilities and showers, as well as easy access to eye wash. Do not use tools that can generate sparks and flames, avoid static electricity, use tools that are grounded. Do not expose the container to mechanical damage.

Emissions from ventilation or work process equipment should be recommended to be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Personal protection equipment:**

***Eye and face protection:***
Use eye and face accessories that have been tested and approved in accordance with relevant standards such as: NIOSH (US) or EN 166 (EU). It is recommended to use polycarbonate safety glasses with side protection, goggles, tightly fitting goggles or face shield.

***Body protection:***
Choose the type of body protection according to the situation, concentration, quantity of the hazardous substance, and the specific concentration at the workplace. Workwear must comply with EN ISO 13688 standard and special work shoes must comply with EN ISO 20347:2012 standard.

***Respiratory protection:***
Where risk assessment shows, air-purifying respirators are appropriate, use a half-face or full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) or just A – brown (LVS EN 141, LVS EN 136) respirator cartridges as a

backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and accessories tested and approved in accordance with relevant national and international standards, NIOSH (USA) or CEN (EU).

***Skin protection:***

Gloves should be inspected before use. Use appropriate glove removal techniques (without touching the inside of the glove) to avoid contact with the product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry your hands. The gloves used must be chemically resistant in accordance with EN 420 or EN ISO 374-1 standards. Protective gloves must be made of one of the materials, with the relevant specifications listed in the table below:

| Glove material | Minimum glove thickness (mm) | Penetration time* (min) |
|---|---|---|
| Buthyl rubber | 0.50 | >480 |
| Nitrile rubber/ Nitrile latex | 0.35 | >480 |
| Fluorocarbon rubber | 0.40 | >480 |
| Polychloroprene | 0.50 | >480 |
| Natural rubber/Natural latex | 0.50 | >480 |
| Polyvinyl chloride | 0.50 | >480 |
| Neoprene | 0.50 | >480 |

* Please note that the penetration time of the glove material in this section has been set at 22°C and using pure propylene glycol. When working at a higher temperature, the resistance of the glove material may be considerably lower, and in such cases, the permitted life of the glove must be shortened. A 1.5-times increase / decrease in the layer thickness doubles / halves the breakthrough time. This data only applies to the pure substance. We recommend that when you start using a new type or other manufacturer's gloves, make sure that they are chemically and mechanically resistant to working conditions. If you have any doubt about the suitability of the gloves, please contact the suppliers of gloves. Transferred to mixtures of substances, these figures should only be taken as an aid to orientation.

***Thermal hazards:*** Combustile product, poorly flammable.

### 8.3. Environmental exposure controls:

Do not allow product to enter drains, surface waters or ground waters. See Section 6. for substance related measures to prevent exposure to environment.

## SECTION 9. Physical and chemical properties.

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

a) **Appearance**: Transparent, red coloured liquid at 20°C and a pressure of 1013 hPa.
b) **Odour:** Odourless.
c) **Odour threshold:** Not measured.
d) **pH:** 9.0 to 9.6 at 20°C temp. (ASTM D 1287; GHS-Sicherheitsdatenblatt, Merck).
e) **Melting / freezing point:** -41°C to -25°C.
f) **Initial boiling point and boiling range:** Propylene glycol (45% - 55%): 104°C to 107°C (Engineering toolbox).
g) **Flash point:** Not measured.
h) **Evaporation rate:** Not measured.
i) **Flammability:** Non flammable upon ignition.
j) **Upper / lower flammability or explosive limits:**
Lower flammable limit (pure propylene glycol): 2.6% by volume;
Upper flammable limit (pure propylene glycol): 12.6% by volume.
(Fire Protection Guide to Hazardous Materials 2010, p. 325-61).
k) **Vapour pressure:** Pure propylene glycol: 20 Pa at 25°C. (ECHA).
l) **Vapour density:** Pure propylene glycol: 2,62 (ECHA).
m) **Relative density:** 1015 to 1025 kg/$m^3$ (ASTM D 1122).
n) **Solubility:** The product is miscible with water in all proportions.
o) **Partition coefficient: n-octanol/water:** (Log Kow (Log Pow)Propylene glycol): -1.07 at 20.5°C. (Hansch, C., Leo, A., D. Hoekman. Exploring QSAR - Hydrophobic, Electronic, and Steric Constants. 1995., p. 3.).
p) **Auto-ignition temperature**: Pure propylene glycol: >400°C at 101 325 Pa (Fire Protection Guide to Hazardous Materials. 14TH Edition, Quincy, MA 2010, p. 325-57).
q) **Decomposition temperature**: Pure propylene glycol: Above boiling point (GESTIS Substance database).
r) **Viscosity:** Pure propylene glycol : 45 mPa*s (dynamic) at 20°C GESTIS Substance database).

s) **Explosive properties:** Based to column 2 of Annex VII to the REACH Regulation, does not apply, product is not explosive. There are no chemical functional groups associated with explosive properties.

t) **Oxidising properties:** Based on column 2 of Annex VII to the REACH Regulation, does not apply, product is not oxidising. There are no chemical functional groupos associated with ozidising properties.

**9.2 Other safety information:** None.

## SECTION 10. Stability and reactivity.

### 10.1. Reactivity:
Stable under regular conditions of transportation and use (see Section 7. "Handling and Storage").

### 10.2. Chemical stability:
Stable under storage, transportation and using conditions at lowered and normal ambient temperatures (-24°C to + 40°C), (see Section 7. "Handling and Storage").

### 10.3. Possibility of hazardous reactions:
No hazardous reaction when handled and stored according to provisions. Risk of explosion in contact with perchloric acid. The substance should not be stored with substances with which hazardous chemical reactions are possible.

### 10.4. Conditions to avoid:
Avoid direct sunlight, heat, flames, sparks and incompatible materials. Do not damage product containers.

### 10.5. Incompatible materials:
Strong alkaline solutions, strong acids and oxidizing agents, such as: sodium hydroxide, sulfuric acid, chromium trioxide chromyl chloride, potassium dichromate, potassium permanganate, sodium hypochlorite, sodium peroxide, oleum, phosphorus pentasulfide, fuming nitric acid, silver chlorate.

### 10.6. Hazardous decomposition products:
Product forms carbon monoxide (CO) and carbon dioxide ($CO_2$) when burnt.

## SECTION 11. Toxicological information.

### 11.1. Information on toxicological effects:
Toxicity studies of the product are not available. Information on toxicological effects is determined by evaluation of data of product ingredients. As the product is solution of propylene glycol and additives, information on toxicity, according to REACH dossier, is provided on propylene glycol. Information on toxicity of methyl-1H-benzotriazole and sodium 2-ethylhexanoate is provided additionally.

**Acute toxicity:**

***Effects on humans:*** No data available.

***Effects on animals:***

| Routes of exposure | Exposure dose, concentration | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|
| Acute oral toxicity | LD50: 22 000 mg/kg bw (Propylene glycol) | Rat | OECD 401 | Loss of equilibrium, marked depression, analgesia, coma and finally death after a prolonged exposure. | ECHA |
| Acute oral toxicity | LD50: 2043 mg/kg bw (Sodium 2-ethylhexanoate) | Rat ( Fischer 344) | OECD 401 | Clinical signs: weakness, prostration. | TOXNET |
| Acute oral toxicity | LD50: 720 mg/kg bw (Methyl-1H-benzotriazole) | Rat | OECD 401 | Decrease of general condition, Loss of body weight. Harmful. | ECHA |
| Acute inhalation toxicity | LC50: >317 042 mg/$m^3$ air (2h) (Propylene glycol) | Rabbit | OECD 403 | Signs of ciliated cells alteration were seen and a slight drop in the number of intact mucus filled cells. | ECHA |

| | | | | | |
|---|---|---|---|---|---|
| Acute inhalation toxicity | LC0: 0.11 mg/L (Sodium 2-ethylhexanoate) | Rat | OECD 403 | No adverse effect observed. | ECHA |
| Acute dermal toxicity | LD50: >2000 mg/kg bw (24h) (Propylene glycol) | Rabbit (Albino) | OECD 402 | Lethargy, diarrhea, few feces and/or ptosis were noted in isolated instanses. | ECHA |
| Acute dermal toxicity | LD50: >2000 mg/kg bw (Sodium 2-ethylhexanoate) | Rats (Wistar) | OECD 402 | No adverse effect observed. | ECHA |
| Acute dermal toxicity | LD50: >2000 mg/kg bw (Methyl-1H-benzotriazole) | Rabbit (New Zealand White) | OECD 402 | No signs of toxicity except signs of erythema and discoloration of the back. | ECHA |

***Other information:*** No data available.

***Assessment / Classification:***

After studying all the routes of exposure and due to low concentrations of additives, product is not classified as acutely toxic, according to Annex VI of REACH Regulation and (CLP) Regulation (EC) No. 1272/2008.

**Skin corrosion / irritation:**

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure type | Exposure time | Observation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Single injection of 0.5 ml of propylene glycol. | 4 h | 72 h | Rabbit | OECD 404 | Not irritating. | ECHA |
| Single application of 0.5 ml on skin of sodium 2-ethylhexanoate. | 4 h | 14 days | Rabbit (New Zealand white) | OECD 404 | Not irritating. | TOXNET |
| Single application of 500 mg on skin of methyl-1H-benzotriazole. | 4 h | 7 days | | OECD 404 | Not irritating. | ECHA |

***Other information:*** Minimal effect of dermal exposure.

***Assessment / Classification:***

Following the studied routes of exposure, product is not classified as a skin corrosive / irritant, according to Annex VI of REACH Regulation and (CLP) Regulation (EC) No. 1272/2008.

**Serious eye damage / irritation:**

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure type | Exposure time | Observation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Single injection of 0.5 ml of propylene glycol. | Single application | 96 h | Rabbit (New Zealand white) | OECD 405 | No eye irritation effects. | ECHA |
| Single injection of 100 µL of sodium 2-ethylhexanoate. | 24 h | 7 days | | OECD 405 | Not irritating. | ECHA |
| Single injection of 100 µL of methyl-1H-benzotriazole. | 24 h | 7 days | | OECD 405 | Slightly irritating. | ECHA |

***Other information:*** No data available.

***Assessment / Classification:***

Product is not considered to be an eye irritant and is therefore not subjected for labelling and classification requirements according to according to Annex VI of REACH Regulation and (CLP) Regulation (EC) No. 1272/2008.

### Respiratory or skin sensitisation:

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure type | Exposure time | Observation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Single application of pure propylene glycol. | Single application | 18 h | Mouse (CBA) | OECD 429 | Not sensitising. | ECHA |
| Single injection of 100 µL of sodium 2-ethylhexanoate. | 24 h | 6 days | Guinea pig (Dunkin-Hartley) | OECD 406 | Not sensitising. | ECHA |
| Single intradermal injection of 6% solution of methyl-1H-benzotriazole. | 24 h | 48 h | | OECD 406 | Not sensitising. | ECHA |

***Other information:*** No adverse effect observed (not sensitising).

***Assessment / Classification:***

Product is not considered to be a skin sensitizer and is therefore not subjected for labelling and classification requirements according to (CLP) Regulation (EC) No. 1272/2008.

### Germ cell mutagenicity:

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure dose, concentration | Exposure time | Obserbvation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| 0, 100, 1000, 2500 and 5000 µg/plate (Propylene glycol). | 20 min | Expression time: 2 days at 37°C. | S.typhimurium | OECD 471 | No cytotoxic effects were observed in the standard plate test. | ECHA |
| 1 - 1500 µg/mL (Sodium 2-ethylhexanoate). | 4 h, 24 h | 16 days | Chinese hamster Ovary (CHO) | OECD 476 | No mutagenic effects observed. | ECHA |
| Feeding orally: 500 to 1000 mg/kg bw (Methyl-1H-benzotriazole) | Single application | 24 / 48 / 72 h | Mouse | OECD 474 | Apathy, horrent fur, narcotic state, prone position, spasm. | ECHA |

***Other information:*** No data available.

***Assessment / Classification:***

The available experimental test data are reliable and suitable for classification purposes under Regulation (EC) No. 1272/2008. The available test data revealed not genotoxic potential. The product is not considered to be classified for genetic toxicity under Regulation (EC) No 1272/2008.

### Carcinogenicity:

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure dose, concentration | Exposure time | Obserbvation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Oral feed of 1700 and 2100 mg/kg bw/day. (Propylene glycol). | Daily. | 24 months | Rats | OECD 451 | No adverse effects and no histopathological changes. | ECHA |

***Other information:*** No data available.

***Assessment / Classification:***

Based on the lack of increased tumor incidence, pre-neoplastic lesions or hyperplasia in available chronic toxicity studies, product is not considered as carcinogenic in accordance to (CLP) Regulation (EC) No. 1272/2008.

### Reproductive toxicity:

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure dose, concentration | Exposure time | Obserbvation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Oral feed of 10 100 mg/kg bw/day (propylene glycol). | Daily. | 20 weeks | Mouse (CD-1) | - | No reproductive effects observed. | ECHA |
| Oral feed of 520, 5200 and 10 400 mg/kg bw/day (propylene glycol). | Daily | 18 days. | Mouse (CD-1) | - | No teratogenicity at any concentration level. | ECHA |
| Oral gavage 0, 100, 250 or 500 mg/kg bw/day (sodium 2-ethylhexanoate). | Gestation day 6 through 15 | 12 weeks | Rats (Fischer 344) | EPA OTS 798.4900 | Hypoactivity, ataxia, ocular discharge and periocular encrustations. Reduced skeletal ossification. | ECHA |
| Oral gavage 12.5, 50 or 200 mg/kg bw/day (Methyl-1H-benzotriazole). | Daily | 46 days | Rats (Wistar) | OECD 421 | No teratogenicity at any concentration level. | ECHA |

***Other information:*** No data available

***Assessment / Classification:***

Based on the lack of adverse effects on reproduction and development in available studies with mice and rats, product does not need to be classified for reproductive and developmental toxicity in accordance with (CLP) Regulation (EC) No. 1272/2008.

### Summary of evaluation of the CMR properties:

***Effects on humans:*** No data available.
***Effects on animals:*** No data available.
***Other information:*** No data available.
***Assessment / Classification:*** Based on available data, the classification criteria are not met.

### STOT-single exposure:

***Effects on humans:*** No data available.
***Effects on animals:*** No data available.
***Other information:*** No data available.
***Assessment / Classification:*** Based on available data, the classification criteria are not met.

### STOT-repeated exposure:

***Effects on humans:*** No data available.

***Effects on animals:***

| Exposure dose, concentration | Exposure time | Obserbvation time | Species | Method | Symptoms, effects | Remark |
|---|---|---|---|---|---|---|
| Feeding orally: 0, 200, 400, 900 and 1700 mg/kg bw/day (Propylene glycol). | Daily | 24 months | Rats | OECD 452 | No effects observed. | ECHA |
| Inhalation of 0, 160, 1000, 2200 mg/m$^3$ propylene glycol in air. | 6 h/day,5 days/week | 90 days | Rats (Sprague-Dawley | - | Mortality observed, treatment-related. | TOXNET |

| | | | | | | |
|---|---|---|---|---|---|---|
| Apllication on shaved skin: 0.2 ml (Propylene glycol). | Daily | 4 weeks | Mouse | - | No effects observed. | ECHA |
| Feeding orally: 1 - 917 mg/kg/day (Sodium 2-ethylhexanoate). | Dailys | 91-93 days | Rats (Fischer 344) | EPA OTS 795.2600 | Kidneys, testes and brain weight differences were observed. | ECHA |
| Feeding orally: 50 to 500 mg/kg bw/day (Methyl-1H-benzotriazole). | Daily | 28 days | Rats (Wistar) | OECD 407 | No effects observed. | ECHA |

***Other information:*** No data available.
***Assessment / Classification:***
The product is not classified as specific target organ toxicant for repeated exposure due to low concetrations on ingridients and according to (CLP) Regulation (EC) No. 1272/2008.

**Aspiration hazard:**
***Effects on humans:*** No data available.
***Effects on animals:*** No data available.
***Other information:*** No data available.
***Assessment / Classification:*** Based on available data, the classification criteria are not met.

## SECTION 12. Ecological information.

### 12.1 Toxicity:
Studies of ecological impact of the product are not available. Information on ecotoxicological effects is determined by evaluation of data of product ingredients. As the product is solution of propylene glycol, information about ecological impact, according to REACH dossier, is provided of propylene glycol. Information on the ecological impact of methyl-1H-benzotriazole and sodium 2-ethylhexanoate is provided additionally.

**Acute (short-term) toxicity:**

| Target parameter | Value | Species | Method | Exposure time | Remark |
|---|---|---|---|---|---|
| LC50 | 40 613 mg/L (Propylene glycol) | Freshwater fish - Oncorhynchus mykiss. | OECD 203 | 96 h | ECHA |
| LC50 | >10 000 mg/L (Propylene glycol) | Marine water fish - Scophthalmus maximus. | OECD 203 | 96 h | ECHA |
| LC50 | 180 mg/L (Sodium 2-ethylhexanoate). | Freshwater fish | OECD 203 | 96 h | ECHA |
| LC50 | 180 mg/L (Methyl-1H-benzotriazole). | Freshwater fish - Danio rerio. | OECD 203 | 96 h | ECHA |
| LC50 | 55 mg/L (Methyl-1H-benzotriazole). | Marine water fish - Cyprinodon variegatus. | OECD 203 | 96 h | ECHA |
| LC50 | 18 340 mg/L (Propylene glycol) | Freshwater invertebrates - Ceriodaphnia dubia. | OECD 202 | 48 h | ECHA |
| LC50 | 18 800 mg/L (Propylene glycol) | Marine water invertebrates - Mysidopsis bahia. | OECD 202 | 48 h | ECHA |
| EC50/LC50 | 910 mg/L (Sodium 2-ethylhexanoate) | Aquatic invertebrates - Daphnia magna | OECD 202 | 48 h | ECHA |
| EC50/LC50 | 8.58 mg/L (Methyl-1H-benzotriazole). | Freshwater invertebrates - D. galeata | OECD 202 | 48 h | ECHA |
| EC50/LC50 | 55 mg/L (Methyl-1H-benzotriazole). | Marine water invertebrates - Acartia Tonsa | OECD 202 | 48 h | ECHA |
| EC50 | 19 000 mg/L (Propylene glycol). | Freshwater algae - Pseudokirchnerella subcapitata. | OECD 201 | 96 h | ECHA |
| EC50 | 19 100 mg/L (Propylene glycol). | Marine water algae - Skeletonema costatum. | OECD 201 | 96 h | ECHA |

| | | | | | |
|---|---|---|---|---|---|
| EC50 | 49.3 mg/L (Sodium 2-ethylhexanoate) | Freshwater algae - Desmodesmus subspicatus | - | 72 h | ECHA |
| EC50 | 75 mg/L (Methyl-1H-benzotriazole). | Freshwater algae - | OECD 201 | 96 h | ECHA |
| EC50 | 53 mg/L (Methyl-1H-benzotriazole). | Marine water algae - | OECD 201 | 96 h | ECHA |
| EC50 | 112.1 mg/L (Sodium 2-ethylhexanoate) | Microorganisms -activated sludge | - | 17 h | ECHA |
| EC50 | 1060 mg/L (Methyl-1H-benzotriazole). | Microorganisms -activated sludge | ISO 8192 | - | ECHA |

**Chronic (long-term) toxicity:**

| Target parameter | Value | Species | Method | Exposure time | Remark |
|---|---|---|---|---|---|
| EC10/LC10 | 13 020 mg/L (Propylene glycol) | Water invertebrates - Ceriodaphnia sp. | OECD 204 | 7 days | ECHA |
| LC50 | 63 mg/L (Sodium 2-ethylhexanoate) | Water invertebrates - Daphnia magna | OECD 211 | 24 days | ECHA |
| EC10/LC10 | 0.4 mg/L (Methyl-1H-benzotriazole). | Freshwater invertebrates - D. galeata. | OECD 211 | 48 h | ECHA |
| EC10/LC10 | 10 mg/L (Methyl-1H-benzotriazole). | Marine water invertebrates - Ciona intestinalis | OECD 211 | 48 h | ECHA |

### 12.2. Persistence and degradability:

Product has not been tested.Information on persistence of product is determined by evaluation of data of product ingredients.

***Biodegradation:***

Propylene glycol undergoes reactions with hydroxyl radicals in the atmosphere. The half life of propylene glycol, based on a 12-hr day with an OH radical concentration of $1.5^{-06}$ OH/$cm^3$ is 0.83 days. Overall, propylene glycol is rapidly degraded in the atmosphere.

Propylene glycol undergoes reactions with hydroxyl radicals in water. The half life of propylene glycol, based on an OH radical concentration of 10-17 mol/L is 2.3 years. Overall, propylene glycol is slowly degraded in water.

Propylene glycol, sodium 2-ethylhexanoate and methyl-1H-benzotriazole is not expected to undergo hydrolysis in the environment due to the lack of functional groups that hydrolyze under environmental conditions. There is little potential for biodegradation of methyl-1H-benzotriazole. A study has shown 4% degradation after 28 days under test conditions. In summary, methyl-1H-benzotriazole is considered as non-biodegradable in the aquatic compartment, the same result is expected in soil.

***Aerobic:***

Propylene glycol was found readily biodegradable under aerobic conditions. In an OECD306 test (seawater), after 64 days there was observed 91 - 95.8 % biodegradation. Under aerobic conditions, 106.8 % ($O_2$ consumption), 81.7% ($CO_2$ evolution) and 81 – 97% biodegradation was found for 100 mg/L propylene glycol tested according to OECD Guideline 301 F.

***Anaerobic:***

Available study demonstrate that high concentrations of propylene glycol, released into a soil environment, can be expected to biodegrade under anaerobic conditions (98% after 105 days).

***Other information*:**

According to BOD values, propylene glycol is classified as readily biodegradable and will not be bioaccumulative in water, freshwater sediments and in soil. For the results of studies of biodegradation of propylene glycol, sodium 2-ethylhexanoate and methyl-1H-benzotriazole, see TOXNET, ECHA and PUBCHEM.

### 12.3. Bioaccumulative potential:

Product has not been tested.Information on bioaccumulative potential of product is determined by evaluation of data of product ingredients.

**Partition coefficient n-octanol /water (log Pow):** (Propylene glycol) LogPow =-1.07 (20.5°C). Considered to be low (based on high solubility in water). The main part of product – propylene glycol – does not have any bio accumulative

properties, does not form any toxic compounds with other substances present in the air. (Sodium 2-ethylhexanoate) LogPow = 1.3 (25°C); (Methyl-1H-benzotriazole) LogPow = 1.081 (25°C), therefore no test on bioaccumulation in soil organisms is performed.

**Bioconcentration factor (BCF):**

| Species | Exposure time | Method | Result value | Remark |
|---|---|---|---|---|
| Fish - Leuciscus idus melanotus (Propylene glycol) | 72 h | OECD 305 | BCF = 0.09 | TOXNET |
| Fish - Leuciscus idus melanotus (Methyl-1H-benzotriazole) | 72 h | OECD 305 | BCF = 2.4 | ECHA |

Bioconcentration factor and low partition coefficient suggests the potential for bioconcentration in aquatic organisms is low.

### 12.4. Mobility in soil:

**Known or predetermined prevalence in environmental compartments:**
If product is released to environment, the main ingridients will end up in:

| Environment | Propylene glycol | Sodium 2-ethylhexanoate |
|---|---|---|
| **Air** | 2.98 % | 0.93 % |
| **Water** | 48.8 % | 91.7 % |
| **Soil** | 48.1 % | 3.64 % |
| **Sediment** | 0.07 % | 3.68 % |
| **Suspended sediment** | 0 % | 0.02 % |
| **Biota** | 0 % | 0 % |
| **Aerosol** | 0 % | 0 % |

**Surface tension:** Not measured.

**Adsorption / Desorption:**

| Spreading environment | Mode of transport | Method | Result value (pure substance) | Remark |
|---|---|---|---|---|
| Soil – water (Propylene glycol) | Adsorbption | OECD 106 | *Koc*: 2.9 | TOXNET |
| Soil – water (Sodium 2-ethylhexanoate) | Adsorbption | OECD 106 | *Koc*: 140.87 | TOXNET |
| Soil – water (Methyl-1H-benzotriazole) | Adsorbption | OECD 106 | *Koc*: 110 | ECHA |

Based upon a calculated log Pow values, adsorption to solid phase in soil of the product is not expected. From the water surface, propylene glycol, sodium 2-ethylhexanoate and methyl-1H-benzotriazole will not evaporate into the atmosphere. Propylene glycol will be distributed into the water. This Koc value suggests that propylene glycol is expected to have very high mobility in soil.

Henry's law constant is 0.006 Pa*$m^3$/mol at 25°C (Prophylene glycol).
Henry's law constant is 0.294 Pa*$m^3$/mol at 25°C (Sodium 2-ethylhexanoate).
Henry's law constant is 0 Pa*$m^3$/mol at 25°C (Methyl-1H-benzotriazole).

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

In accordance with Regulation (EC) No 1907/2006, Annex XIII, product does not meet the PBT and vPvB criteria and is not a PBT or vPvB substance.

### 12.6. Other adverse effects: None.

### 12.7. Additional information: No data available.

## SECTION 13. Disposal considerations.

### 13.1 Waste treatment methods:

**Product / Packaging disposal:**
In accordance to annex III of "Commission notice on technical guidance on the classification of waste" **(2018/C 124/01)**, the product, without any impurities, **is not** classified as hazardous waste.
In accordance to Commission decision **(2014/955/EU)** and Republic of Latvia Cabinet of Ministers Regulation **No. 302**, the product, without any impuritiues, **is not** classified as hazardous waste (see EWC codes).

Dispose of collected material as unused material. Burn in a chemical incinerator equipped with an afterburner and scrubber. Contact nearest waste disposal facility for further instructions.

Collection of small and medium amounts of products: Place in a collection container for halogen-free organic solvents and halogen-free organic solutions. Collection vessels must be clearly labelled with a systematic description of their contents. Store the vessels in a well-ventilated location away from direct exposure of sun.

Empty the product cans or drums, free them from as much of the product as possible. The packing needs to be cleaned. In accordance with Regulation (EC) No. 1357/2014, empty packaging, clean from product, **is not** classified as hazardous waste. Re-use or dispose clean packing material.

If packing contains product or is contaminated, or if packing cannot be cleaned, dispose of it as unused product. Dispose of product and its packaging safely in accordance with regional and national environmental regulations.

**Waste codes / waste designations according to EWC:**
According to the European Waste Catalog (EWC) and European List of Waste (LoW), the applicable codes for product are:
15 01 02 - Plastic packaging (MNH – mirror non hazardous);
16 01 15 - Antifreeze fluids other than those mentioned in 16 01 14 (MNH – mirror non- hazardous);

**Sewage disposal-relevant information:**
Waste should not be disposed of by release into sewers.

**Other disposal recommendations:**
It is the responsibility of the waste treatment company to make a final decision on the relevant waste management, disposal or recycling method in accordance with regional, national or European legislation and possible adaptation to local conditions.

## SECTION 14. Transport information.

| ADR | IMDG | ICAO-TI/IATA-DGR | ADN | RID |
|---|---|---|---|---|
| **14.1. UN Number:** | | | | |
| **Not applicable.** | | | | |
| **14.2. UN proper shipping name:** | | | | |
| **Not applicable.** | | | | |
| **Transport document description:** | | | | |
| **Not applicable.** | | | | |
| **14.3. Transport hazard class(es):** | | | | |
| **Not applicable.** | | | | |
| **14.4. Packing group:** | | | | |
| **Not applicable.** | | | | |
| **14.5. Environmental hazards:** | | | | |
| **Not classified as environmentally hazardous.** | | | | |

### 14.6. Special precautions for users:

**Road transport (ADR):** Not applicable.
**Transport by sea (IMDG):** Not applicable.

**Air transport (IATA):** Not applicable.
**Inland waterway transport (ADN):** Not applicable.
**Rail transport (RID):** Not applicable.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**
Not applicable

## SECTION 15. Regulatory information.

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

**EU regulations:**

- Regulation (EC) **No. 1907/2006** of the European Parliament and Council of 18. December 2006 on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH);
- Regulation (EC) No. **1272/2008** - classification, labelling and packaging of substances and mixtures (CLP);
- Commission regulation (EU) **No. 1357/2014** of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives;
- Regulation **649/2012/EU** concerning the export and import of hazardous chemicals (PIC);
- Regulation **850/2004/EC** on persistent organic pollutants (POP);
- European Agreement concerning the International Carriage of Dangerous Goods by Road **(ADR)**;
- European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (**ADN**);
- Commission notice on technical guidance on the classification of waste **2018/C 124/01**;
- Directive **2008/98/EC** of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives;
- Regulation (EC) **No. 166/2006** of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC;

**International regulations:**

- Regulations concerning the International Carriage of Dangerous Goods by Rail (**RID**);
- International Maritime Dangerous Goods Code (**IMDG**);
- International Convention for the Prevention of Pollution from Ships (**MARPOL 73/78**);
- Internationall Aviation Transport Association regulations **(IATA)**;
- International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (**IBC**)

**National regulations (Latvia):**

- Chemical Substances Law;
- Republic of Latvia Cabinet of Ministers Regulation **No. 795**: “Procedures for Registration of Chemical Substances and Mixtures and Their Database”;
- Republic of Latvia Cabinet of Ministers Regulation **No. 325**: “Labour Protection Requirements when Coming in Contact with Chemical Substances at Workplaces”;
- Republic of Latvia Cabinet of Ministers Regulation **No. 302:** “Provisions regarding the waste classification and the characteristics rendering the hazardous waste”;
- Republic of Latvia Cabinet of Ministers Regulation **No. 107**: "Procedure for Classification, Labeling and Packaging of Chemicals and Chemical Products";
- Labour Protection Law;
- **LVS EN 149 + A1:2009** - Standard for disposable dust respirators with or without valve according to which they are labeled with FFP1, FFP2 or FFP3 depending on protection class;
- **LVS EN 143:2002 + AC/AC:2005** - Standard for dust filters P1, P2, P3 for use with half masks and full face masks;
- **LVS EN 141:2002** - Standard for gas and combined filters;
- **LVS EN 14387:2004+A1:2008** - Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking;
- **EN 420**: The standard of glove safety;
- **LVS EN 388** - "Protective gloves against mechanical effects";
- **EN469** - Protective clothing for firefighters - Requirements for firefighting protective clothing;
- **LVS EN ISO 374-1** - "Protective gloves against dangerous chemicals and microorganisms";
- **LVS EN 166:2002** - “Individual eye protection. Specifications ”;

- **LVS EN ISO 13688** - "Protective clothing - General requirements;
- **LVS EN ISO 20347:2012** - "Personal protective equipment - Occupational footwear"

### 15.2. Chemical safety assessment:

No chemical Safety Assessment has been carried out for this mixture.

## SECTION 16. Other information.

### 16.1. Indication of changes:

Release Date: **13.01.2017.**
Date of revision: **12.09.2019.**
Version: **2.0.**

### 16.2. List of abbreviations and acronyms used throughout the Safety Data Sheet:

**CPR** – Artificial respiration or cardiopulmonary resuscitation;
**SCBA** – Self-contained breathing apparatus;
**OEL –** Occupational exposure limit;
**DNEL** – Derived njo effect level;
**PNEC** – Predicted no effect contrentation;
**STOT** – Specific target organ toxicity;
**CMR** – Carcinogenic, mutagenic and reprotoxic chemicals;
**LD50** – Median lethal dose;
**LC50** – Median lethal concentration;
**EC50** – Half maximal effective concentrtation;
**LC0 -** Maximum tolerable concentration;
**LC10** – Lethal dose at which 10% of the test population are killed;
**EC10** – Effective concentration at which it is expected 10% of the test organisms would show an adverse effect;
**PBT/ vPvB** – Persistent, bioaccumulative and toxic and very persistent and very bioaccumulative;
**OECD** – Organisation for Economic Co-operation and Development;
**ppm** – parts per million;
**bw** – body weight;
**BCF** - Bioconcentration factor;

### 16.3. Key literature references and sources for data:

Toxnet, Pubchem, ECHA, Gestis substance database.