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

1.1. Product identifier:

Substance name: Summer windshield wash fluid, 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;
PC35 – Washing and cleaning products;
PROC5 – Mixing or blending in batch processes;
PROC8a – Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
ERC8d – Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor);
ERC10b – Widespread use of articles with high or intended release (outdoor);

Descriptor codes are only indicative, as they are dependent on end use of consumer.

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 26624000(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) 67042468; (+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.
Poison Control Centers in Europe can be found on this site https://poisoncentres.echa.europa.eu/appointed-bodies

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, product does not need to be classified.

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:
P301+P312 – IF SWALLOWED: call a POISON CENTER or doctor / physician IF you feel unwell;
P302+P352 – IF ON SKIN: Wash with plenty of water;
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing;
P501 – Dispose of contents / container in accordance to local and international regulations.

Supplemental Hazard information (EU): Not applicable.

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 available.	Not applicable.	90 - 99%
Fragrance "Cherry/ Almond"	Not available.	Not availabe	Not available.	Skin Sens. 1 (**H317** – May cause an allergic skin reaction); Skin Irrit. 2 (**H315** – Causes skin irritation); Eye Irrit. 2 (**H319** – Causes serious eye irritation); Aquatic Chronic 4 (**H413** – May cause long lasting harmful effects to aquatic life).	0.02 – 0.04 %
Anionic surfactants	Not available.	Not availabe	Not available.	Not applicable.	<0.02 %
Ethanol (C_2H_5OH)	64-17-5	200-578-6	01-2119457610-43-XXXX	Flam. Liq. 2 (**H225** - Highly flammable liquid and vapour).	<0.02 %
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	500-234-8	01-2119488639-16-XXXX	Skin Irrit. 2 (**H315** – Causes skin irritation); Eye Dam. 1 (**H318** – Causes serious eye damage); Aquatic Chronic 3 (**H412** – Harmful to aquatic life with long lasting effects).	<0.01 %
Sodium tripolyphosphate ($Na_5O_{10}P_3$)	7758-29-4	231-838-7	01-2119430450-54-XXXX	Skin Irrit. 2 (**H315** – Causes skin irritation); Eye Irrit. 2 (**H319** – Causes serious eye irritation);	<0.01 %
Tetrasodium ethylene-diamine-tetra-acetate; ($C_{10}H_{12}N_2Na_4O_8$); [EDTA4Na]	64-02-8	200-573-9	01-2119486762-27-XXXX	Acute Tox. 4 (**H302** – Harmful if swallowed); Eye Dam. 1 (**H318** – Causes serious eye damage); Acute Tox. 4 (**H332** – Harmful if inhaled).	<0.01 %
Mixture:				Acute Tox. 3 (**H301** – Toxic if swallowed); Acute Tox. 2 (**H310** – Fatal in contact with skin); Acute Tox. 2 (**H330** – Fatal if inhaled); Skin Corr. 1B (**H314** – Causes severe skin burns and eye damage); Skin Sens. 1A (**H317** – May cause an allergic skin reaction); Eye dam. 1 (**H318** – Causes serious eye damage); Aquatic Chronic 1 (**H410** – Very toxic to aquatic life with long lasting effects).	<0.0001 %
2-Methyl-2H-isothiazolin-3-one (C_4H_5NOS)	55965-84-9	911-418-6	01-2120764691-48-XXXX		
5-Chloro-2-methyl-2H-isothiazolin-3-one [C_4H_4ClNOS]	55965-84-9	911-418-6			
Colour	Not available.	Not availabe	Not available.	Not applicable.	-

Fragrance "Cherry/ Almond" consist of: Citronellol; Citral; Linalool; Coumarine; D-Limonene; Eugenol; Geraniol Fine; Cinnamic Aldehyde; Benzyl Alcohol; Terpineol; Phenyl Ethyl Alcohol; Dihydromyrcenol; Vertenex (PTBCH Acetate); Aldehyde C14; Ionone Beta; Ethyl Acetate; Benzoic Aldehyde; Anisic Aldehyde; Hexyl Cinnamic Aldehyde Alpha; Gamma-Methylionone-Ison aline 70.

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 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 to fresh air, away from area of accident. If breathing is difficult, administer oxygen. If not breathing, give artificial resuscitation (CPR). In every cases where there is doubt of person's life or if symptoms remain, seek medical attention.

Following skin contact:
Wash the affected area thoroughly with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. 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. After rinsing eyes with water, rinse once more with physiological saline (0.9% NaCl) solution. Remove contact lenses if possible and if safe to do. If irritation, redness or blinking persists, consult a doctor immediately.

Following ingestion:
If the product has been swallowed, rinse mouth with water, do not induce vomiting. Keep affected person warm and treat for shock. If the person is conscious, give him / her a glass of water to drink, or better, apply charcoal (3 tablespoons as a suspension in a glass of water). During spontaneous vomiting hold the head of the casualty low with the body in a prone position in order to avoid aspiration of vomit. Never introduce anything into the mouth of an unconscious person.

Self-protection of the first aider:
Pay attention to personal 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: Slight through to moderate irritation due to the splashes of liquid. Strong reddening / swelling of the conjunctiva, conjunctivitis, corneal opacity, danger of permanent eye damage.

Skin: Minor / no irritation, degreasing sensation, dryness, itching and skin cracking. After massive contact watch for danger of skin absorption and possibly delayed systemic effect.
Inhalation: After massive inhalation, irritation of the upper airways is possible (coughing, sore throat).
Ingestion: After high doses in most cases spontaneous vomiting also nausea, abdominal pain, diarrhoea. Absorptive-toxic effects are possible (probably favored by surfactants).

Absorbption:	No data available.
CNS symptoms:	Not applicable.

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

Notes to doctor: Treat symptomatically. Observation of vital functions. Provide the physician information about the substance/product, first aid measures and treatment already administered.

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, carbon dioxide (CO_2).

Unsuitable extinguishing media: Full water jet.

5.2. Special hazards arising from the substance or mixture:

Hazardous combustion products:

Product itself is non combustile, but when involved in fire, carbon monoxide (CO), carbon dioxide (CO_2), nitrogen oxides (NO_x) will be formed when burning. 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 combustion, acrid, 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 its vapors is 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 increase will occur if containers are exposed to heat, therefore evaporation of solution can result in rupture of container, it 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 if it can be done with minimal risk. Water mist may be useful in minimizing or dispersing vapors. If possible, collect used extinguishing water separately, to prevent it from entering drains.

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.

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. Stop leak if possible, without risk. Isolate and evacuate the danger zone, reduce the presence of persons, who are not involved in the rescue operation.

6.2. Environmental precautions:

Do not allow large quantities of product to enter water courses, drains, sewers, ground water or ground and in case of large accidental spill into the water supply, inform local authorities immediately, to stop the water supply and use. 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 by using: booms and pads, which can be found in spill kit if, it is safe to do. Scoop as much product as possible in to tight and secure containers. Absorb remains in vermiculite, dry sand, silica gel or any absorbent non-combustile material, place the used absorbent in closed, secure and suitable containers.

For cleaning up:

The affected area should be rinsed and if necessary washed with water. After containing the substance, rinse the area with plenty of water. Clean up remains by mopping up. Dispose of collected product in according to section 13. In the case of small spills, wipe the surface with non-combustile absorbent material, clean surface with water.

Other information:

Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes should be worn during spill clean-ups.

6.4. References to other sections:

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 and away from direct sunlight. Handle opened container with care, close after use. Avoid splashing. Handle in accordance with good industrial hygiene and safety procedures. Avoid repeated or prolonged contact with skin and eyes. Avoid inhalation of mist. Use appropriate personal 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 heat, flame, spraks and ignition – do not smoke. Fire fighting equipment must be available. Take precautionary measures against static discharges. Earth all parts which can be electrically charged. Transfer at a slow speed to avoid the creation of electrostatic charges.

Measures to prevent aerosol and dust generation:

Avoid spraying in enclosed spaces. Do not transport with using compressed air.

Measures to protect the environment:

When using a product, if a large product vapor concentration occours in enclosed areas, air ventilation systems should be equipped with activated carbon filters. 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 mist or 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, drinks or animal food. Work clothing that becomes wet should be immediately removed.

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 – can be stored at ambient temperatures (from +1°C up to +30°C). Protect from freezing. Protect containers against physical damage. Containers 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. Ground containers, tanks and transfer equipment to eliminate static electric discharge. The floor should not have a floor drain.

Packaging materials:
Suitable packing material: Stainless steel, glass, polypropylene (PP), polytetrafluoroethylene (PTFE), polyfluoroethylene (PFE), vinylidene fluorides (PVDF), high density polyethylene (HDPE), low density polyethylene (LDPE), polysulfone (PSU).
Non suitable packaging materials: Aluminium, galvanised iron,steel, zinc alloys, magnesium alloys, urethanes.

Product can be filled in the package chosen by the buying customer, as long as it ensures safe transportation and storage of the product. Test or get manufacturers recommendation of material prior to use.

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 or covered with insulation material. It is recommended to use anti-spill container under the IBC containers or drums when transferring the product. 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. Store in the original container as much as possible. Containers may be hazardous when empty. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied.

Storage class: Storage class 12 (Non-flammable liquids in non-flammable packages).
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. Store out of the reach of children. Storage with the following substances is prohibited: Pharmaceuticals, foods, animal feeds, infectious and radioactive substances, explosive substances, gases, strong oxidizing substances of storage class 5.1A. Only products and substances of the same storage class can be stored together. The product should not be stored with substances with which hazardous chemical reactions are possible.

7.3. Specific end use(s):
Windshield cleaning fluid. Indicative use only, as it strongly depends on intended consumer enduse.

SECTION 8. Exposure controls / personal protection.

8.1. Control parameters:
Components with workplace control parameters:

Component	CAS No.	Control parameter; value (LV)		Base
		OEL 8h.	Short term, 15 min.	
Ethanol	64-17-5	500 ppm; 1000 mg/m^3	1000 ppm; 1900 mg/m^3	Occupaional health and safety requirements for exposure to chemicals at work spaces

DNEL values of exposure to human health:
The product is mixture of various substances. DNEL of the product is not determined. DNEL values, physicochemical properties of the pure substances contained in product, which could have the most negative effect, according to REACH dossier, are provided.

A – Alcohols, C12-14, ethoxylated, sulfates, sodium salts;
B – Sodium tripolyphosphate ($Na_5O_{10}P_3$);
C – Mixture of 2-Methyl-2H-isothiazolin-3-one and 5-Chloro-2-methyl-2H-isothiazolin-3-one;

Mode of exposure	Type of exposure	DNEL value (workers)	DNEL value (public consumers)	The most negative physicochemical effect
Inhalation	Acute effect, systemic	**(B)** 661 µg/m³	**(B)** 660 µg/m³	Repeated dose toxicity.
Inhalation	Acute effect, local	**(Ethanol)** 1900 mg/m³; **(EDTA4Na)** 3 mg/m³; **(C)** 40 µg/m³.	**(Ethanol)** 950 mg/m³; **(EDTA4Na)** 1.2 mg/m³; **(C)** 40 µg/m³.	Irritation (respiratory tract); repeated dose toxicity.
Inhalation	Chronic effect, systemic	**(Ethanol)** 950 mg/m³; **(A)** 175 mg/m³; **(B)** 661 µg/m³.	**(Ethanol)** 114 mg/m³; **(A)** 52 mg/m³; **(B)** 661 µg/m³.	Repeated dose toxicity.
Inhalation	Chronic effect, local	**(EDTA4Na)** 1.5 mg/m³; **(C)** 20 µg/m³.	**(EDTA4Na)** 600 µg/m³; **(C)** 40 µg/m³.	Repeated dose toxicity.
Dermal	Acute effect systemic	**(B)** 375 µg/kg bw/day	**(B)** 375 µg/kg bw/day	Repeated dose toxicity.
Dermal	Acute effect, local	(iii)	(iii)	Not applicable.
Dermal	Chronic effect, systemic	**(Ethanol)** 343 mg/kg bw/day; **(A)** 2750 mg/kg bw/day; **(B)** 375 µg/kg bw/day.	**(Ethanol)** 206 mg/kg bw/day; **(A)** 1650 mg/kg bw/day; **(B)** 375 µg/kg bw/day.	Repeated dose toxicity.
Dermal	Chronic effect, local	**(A)** 132 µg/cm²	**(A)** 79 µg/cm²	Repeated dose toxicity.
Through eyes	Acute effect, local	(ii)	(i)	Not applicable.
Oral	Acute effect, systemic	(ii)	**(B)** 750 µg/kg bw/day; **(C)** 110 µg/kg bw/day.	Repeated dose toxicity.
Oral	Acute effect, local	(ii)	(iii)	Not applicable.
Oral	Chronic effect, systemic	(ii)	**(Ethanol)** 87 mg/kg bw/day; **(A)** 15 mg/kg bw/day; **(B)** 750 µg/kg bw/day; **(EDTA4Na)** 15 mg/kg bw/day; **(C)** 90 µg/kg bw/day.	Effect on fertility; repeated dose toxicity.
Oral	Chronic effect, local	(ii)	(iii)	Not applicable.
i) hazard identified but no DNEL available, ii) no exposure expected, iii) no hazard identified				

Predicted no effect contrentation values:
PNEC values of the product are not determined. PNEC values of pure substances contained in product according to REACH dossier are provided.

Environmental protection target	PNEC value
Fresh water	**(A):** 240 µg/L, Periodic exposure – 71 µg/L; **(B):** 5 µg/L, Periodic exposure – 50 µg/L; **(EDTA4Na):** 2.2 mg/L, Periodic exposure – 1.2 mg/L; **(C):** 3.39 µg/L, Periodic exposure – 3.39 µg/L.
Freshwater sediments	**(A):** 916.8 µg/kg, Periodic exposure – PNEC value not available; **(B):** 190 µg/kg, Periodic exposure – PNEC value not available; **(C):** 27 µg/kg, Periodic exposure – PNEC value not available.
Marine water	**(A):** 24 µg/L, Periodic exposure – PNEC value not available; **(B):** 5 µg/L, Periodic exposure – PNEC value not available. **(EDTA4Na):** 220 µg/L, Periodic exposure – PNEC value not available; **(C):** 3.39 µg/L, Periodic exposure – 3.39 µg/L.
Marine sediments	**(A):** 91.7 µg/kg, Periodic exposure – PNEC value not available; **(C):** 27 µg/kg, Periodic exposure – PNEC value not available.
Food chain	**(D):** 133 mg/kg food, Periodic exposure – PNEC value not available.

Microorganisms in sewage treatment	**(A):** 10 µg/L, Periodic exposure – PNEC value not available; **(EDTA4Na):** 43 mg/L, Periodic exposure – PNEC value not available; **(C):** 230 µg/L, Periodic exposure – PNEC value not available.
Soil (agricultural)	**(A):** 7.5 mg/kg, Periodic exposure – PNEC value not available; **(B):** 140 mg/kg, Periodic exposure – PNEC value not available; **(EDTA4Na):** 720 µg/L, Periodic exposure – PNEC value not available; **(C):** 10 µg/L, 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 mist, 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 facility. Avoid static electricity, use tools and containers that are grounded. Do not expose the container to mechanical damage.

Emissions from ventilation or work process equipment should be recommended to checked to ensure they comply with the requirements of environmental protection legislation. In some cases, 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, goggles, tightly fitting goggles or face shield to protect eyes from splashes or fine mist.

Body protection:

Choose the type of body protection according to the situation, concentration and 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. Wear an apron or a lab coat. It is recommended to use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the product at the specific workplace.

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

Skin protection:

The following information is valid for aqueous and saturated solutions of the product. Skin protection cremes do not protect as effectively against the product as protective gloves. Gloves should be inspected before use. Use appropriate glove removal techniques (without touching the inside of the glove) to avoid contact with the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash hands with soap and water 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	0.40	>480
Fluorocarbon rubber	0.40	>480
Polychloroprene	0.50	<60
Natural rubber /Natural latex	0.50	<60
Polyvinyl chloride	0.70	<120
Neoprene	0.50	>420

*Please note that the penetration time of the glove material in this section has been set at 22°C and using pure ethanol. 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: Not applicable.

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**:	Red/ orange liquid at 20°C and a pressure of 1013 hPa.
b)	**Odour:**	Cherry/ almond odour.
c)	**Odour threshold:**	Not measured.
d)	**pH:**	6 to 9 at 20°C temp.
e)	**Melting/freezing point:**	~0°C.
f)	**Initial boiling point and boiling range:**	98°C to 102°C.
g)	**Flash point:**	Not applicable.
h)	**Evaporation rate:**	Not measured.
i)	**Flammability:**	Non-flammable.
j)	**Upper/lower flammability or explosive limits:**	Not measured.
k)	**Vapour pressure:**	Not measured.
l)	**Vapour density:**	Not measured.
m)	**Relative density:**	1002 kg/m^3 at 20°C temp.
n)	**Solubility:**	Fully miscible with water . Miscible with methanol, ethanol and acetone.
o)	**Partition coefficient: n-octanol/water:**	Not measured.
p)	**Auto-ignition temperature**:	Not measured.
q)	**Decomposition temperature**:	Not measured.
r)	**Viscosity:**	Not measured.
s)	**Explosive properties:**	Product is not explosive.
t)	**Oxidising properties:**	Product is not oxidising.

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 normal ambient temperatures (+1°C to + 30°C), (see Section 7. “Handling and Storage”).

10.3. Possibility of hazardous reactions:

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid:

Avoid direct sunlight, heat, high temperatuires, flames, sparks and incompatible materials. Protect from freezing. Do not damage product containers.

10.5. Incompatible materials:

Alkali metals; strong alkali solutions; strong acids; reducing agents; oxidizing agents, such as chlorine, nitric acid, permanganates, ammonium nitrate, halogens or chromate solutions; amines and mercaptans. Do not store together with explosive substances (storage class 4.1A); flammable solid substances or desensitized substances (storage class 4.1B); pyrophoric substances; substances liberating flammable gases in contact with water; strongly oxidizing substances (storage class 5.1A); non combustible acutely toxic substances (storage class 6.1B).

10.6. Hazardous decomposition products:

Product may form carbon monoxide (CO), carbon dioxide (CO_2), nitrogen oxides (NO_x), sulphur oxides (SO_x) and hydrogen chloride (HCl) when burnt at high temperatures.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects:

Studies of toxicity of the product are not available. As the product is mixture of various substances, information on toxicity, according to REACH dossier, is provided on pure substances contained in product.

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: 7060 mg/kg **(Ethanol)**	Rat	OECD 401	No adverse effect observed.	TOXNET
Acute oral toxicity	LD50: 2870 mg/kg bw **(A)**	Rat	OECD 401	There were deaths among animals dosed at 4000 and 5000 mg/kg bw.	ECHA
Acute oral toxicity	LD50: >1780 — <2000 mg/kg bw **(EDTA4Na)**	Rat (Wistar)	OECD 401	Dyspnea, apathy, ataxia, shaggy fur, poor general state; fully reversible within 5 days	ECHA
Acute inhalation toxicity	LD50: 114 mg/L **(Ethanol)**	Mouse	OECD 403	Slight to moderate ataxia was observed.	ECHA
Acute inhalation toxicity	LD50: >2000 mg/kg bw **(A)**	Rat	OECD 403	No clinical signs of toxicity occurred.	ECHA
Acute dermal toxicity	LDLo: 20 g/kg **(Ethanol)**	Rabbit	OECD 402	No adverse effect observed.	PUBCHEM

Other information: No data available.

Assessment / Classification:

After studying all the routes of exposure and according to CLP, product is not considered to make acute toxicity and does not meet the criteria for classification.

Skin corrosion / irritation:

Effects on humans: No data available.

Effects on animals:

Exposure dose, concentration	Exposure time	Observation time	Species	Method	Symptoms, effects	Remark
0.5 g of moistened test substance was applied to a spot of shaved skin **(A)**	4 h	21 days	Rabbit (New Zealand white)	OECD 404	Erythema score: 3.2/4; edema score 3.2/4.	ECHA
0.5 g of moistened test substance was applied to a spot of shaved skin **(B)**	4 h	30 min, 24, 48 and 72 h.		OECD 404	Not irritating.	ECHA
0.5 g of moistened test substance was applied to a spot of shaved skin **(EDTA4Na)**	4 h	8 days	Rabbit (Vienna white)	OECD 404	There was a slight erythema (grade 1) in all animals 30 - 60 min after removal of TS; Not irritating.	ECHA

0.5 ml of test substance was applied to a spot of shaved skin **(C)**	4 h	60 min, daily for 12 days.	Rabbit (New Zealand white)	OECD 404	Severe edema score: 4/4. Corrosive.	ECHA

Other information: Skin may become dry after contact with the product. A slight redness may occur.
Assessment / Classification:
Following the studied routes of exposure, product is not classified as a skin irritant, according to Regulation (EC) No 1272/2008 (CLP).

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 0.1 ml **(Ethanol)**	Single application	72h	Rabbit (New Zealand white)	OECD 405	Immediate moderate redness.	ECHA; PUBCHEM
Single application of 10% solution **(A)**	Single application	72h	Rabbit (New Zealand white)	OECD 405	Adverse effect observed (highly irritating/corrosive).	ECHA
Single injection of 0.1 g/10ml solution of **(B)**	30 s	1, 24, 48 and 72 h and on day 4.		OECD 405	Midly irritating to unwashed eyes.	ECHA
Single application of 50 mg solution. **(EDTA4Na)**	10 min	1, 3, 24, 72 h, 4 d, 7d, 8 days after application.	Rabbit (Vienna white)	OECD 405	During the observation time grease like layer on the eyes was observed. Irritating.	ECHA
Single application on to eye of 0.1 ml of test substance **(C)**	30 s	24h, 48h, 7 days	Rabbit (New Zealand white)	OECD 405	Product produces severe lesion to the eyes of rabbit which were not reversible. Corrosive.	ECHA

Other information: Not applicable.
Assessment / Classification:
Product is not considered to be an eye irritant and is therefore is not subjected for labelling and classification, according according to Regulation (EC) No 1272/2008 (CLP).

Respiratory or skin sensitisation:

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

Exposure type	Exposure time	Observation time	Species	Method	Symptoms, effects	Remark
25 ul of 0 to 1000 ppm concentration of test substance. **(C)**	Once a day for 3 days	3 days	Mouse	-	Adverse effect observed (sensitising)	ECHA

Other information: Substances, contained in product: A, B and (EDTA4Na) are not sensitizing to skin.
Assessment / Classification:
Due to low concentration of substance **C** in product, product is not considered to be a skin sensitizer and is therefore not subjected for labelling and classification requirements according to Regulation (EC) No 1272/2008.

Germ cell mutagenicity:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: Substances A, B, D, (EDTA4Na) are not genetically toxic.
Assessment / Classification:
The available test data revealed no genotoxic potential. Due to low concentrations of substances contained in product, product is not considered to be classified for genetic toxicity according to Regulation (EC) No 1272/2008 (CLP).

Carcinogenicity:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: For more details, see relevant substances, contained in product, at ECHA.
Assessment / Classification:
Product is not considered to be classified for carcinogenicity under Regulation (EC) No 1272/2008.

Reproductive toxicity:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: For more details, see relevant substances, contained in product, at ECHA.
Assessment / Classification: Product is not toxic to reproduction. As a result, the product is not classified for toxicity to reproduction according to Regulation (EC) No 1272/2008 (CLP).

Summary of evaluation of the CMR properties:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: For more details, see relevant substances, contained in product, at ECHA.
Assessment / Classification:
Based on available data, the product does not meet the criteria to be classified as a mutagenic, category 1A or 1B mutagen according to Regulation (EC) No 1272/2008 (CLP).

STOT-single exposure:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: For more details, see relevant substances, contained in product, at ECHA.
Assessment / Classification:
Product is not classified for STOT SE category 1, according to Regulation (EC) No 1272/2008 (CLP).

STOT-repeated exposure:

Effects on humans: No data available.
Effects on animals: No data available.
Other information: For more details, see relevant substances, contained in product, at ECHA.
Assessment / Classification:
Dose toxicity was not observed in any of the studies. Based on available data, the classification criteria are not met for product to be classified for repeated dose toxicity under Regulation (EC) No 1272/2008 (CLP).

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. As the product is a mixture of various substances, information about ecological impact, according to REACH dossier, is provided of pure substances contained in product.

Acute (short-term) toxicity:

Target parameter	Value	Species	Method	Exposure time	Remark
LC50	7.1 mg/L **(A)**	Freshwater fish - Zebrafish (Danio rerio)	OECD 203	96 h	ECHA
EC50	7.2 - 7.4 mg/L **(A)**	Aquatic invertebrates - Daphnia magna	OECD 202	48 h	ECHA
EC50	27 - 27.7 mg/L **(A)**	Freshwater algae	OECD 201	72 h	ECHA
LC50	1850 mg/L **(B)**	Freshwater fish	OECD 212	24 h	ECHA
EC50	100 mg/L **(B)**	Aquatic invertebrates	-	48 h	ECHA
EC50	900 mg/L **(B)**	Freshwater algae	-	7 days	ECHA
LC50	190 - 300 µg/L **(C)**	Freshwater fish - Oncorhynchus mykiss	EPA OPP 72-1	94 h	ECHA
LC50	0.16 mg/L **(C)**	Freshwater invertebrates - Daphnia magna	EPA OPP 72-2	48 h	ECHA
LC50	0.282 mg/L **(C)**	Marine invertebrates - Daphnia magna	EPA OPP 72-2	48 h	ECHA
EC50	0.037 mg/L **(C)**	Freshwater algae	OECD 201	72 h	ECHA
EC50	4.5 mg/L **(C)**	Microorganisms	OECD 209	3 h	ECHA

Chronic (long-term) toxicity:

Target parameter	Value	Species	Method	Exposure time	Remark
NOEC	0.14 mg/L **(A)**	Freshwater fish - Oncorhynchus mykiss	OECD 215	90 days	ECHA
EC50	370 - 520 µg/L **(A)**	Water invertebrates- Daphnia magna	OECD 211	21 days	ECHA
NOEC	46.4 µg/L **(C)**	Freshwater fish - Danio rerio	OECD 210	35 days	ECHA
LC50	>0.18 mg/L **(C)**	Water invertebrates- Daphnia magna	EPA OPP 72-4	21 days	ECHA

12.2. Persistence and degradability:

Biodegradation:

The substance **A**, contained in product, is readily biodegradable in water. Substance **B**, contained in product, is an inorganic substance, biodegradation studies are not applicable. There are a number of studies indicating that under natural conditions hydrolysis to pyrophosphate and then to orthophosphate is the primary route of degradation.

Substance **C** is stable to hydrolysis at pH 5 and 7. At pH 9 however, substance **C** hydrolyses rapidly with an extrapolated half-life of 22 days and 16.9 days. Substance **C**, contained in the product is involved in the photolysis process in the environment. The half-life in natural sunlight is 6.6 days. The major photodegradation products are 5-chloro-3-methyl-4-thiazolin-3-one and N-methyl malonamic acid. The major degradative pathway involves cleavage of the isothiazolone ring. **C** is classified as being readily biodegradable, failing the 10 day window and substance **C** is classified as being not readily biodegradable according to the criteria of the test, although significant biodegradation occurred. Substance **C** rapidly biodegrades in sandy soil with a half-life of 6.5 hours. Metabolism involves cleavage of the isothiazolone ring

with the ultimate metabolite being CO_2. This indicates that substance **C**, the metabolites, and the bound residue were biodegrading to CO_2.

EDTA4Na, contained in product, is resistant to hydrolysis, neither strong acids nor alkalis cause any degradation. **EDTA4Na** is not readily biodegradable according to OECD criteria, but ultimately biodegradable under special environmental conditions. It was shown that under special conditions like slightly alkaline pH the biodegradability of **EDTA4Na** is considerably improved. **EDTA4Na** was biodegradable in an enhanced test using preadapted activated sludge. Therefore it can be concluded that **EDTA4Na** is ultimately biodegradable under such conditions.

Other information:

For further results of biodegradation studies of substances contained in product, see: Toxnet, ECHA and PUBCHEM.

12.3. Bioaccumulative potential:

Partition coefficient n-octanol /water (log Kow):

Log Kow 0.3 (20°C) for substance A, log Pow of -3.86 (20°C) for **EDTA4Na** are considered to be low (based on high solubility in water).

Bioconcentration factor (BCF):

Species	Exposure time	Method	Result value	Remark
Fish - Leuciscus idus (**Substance C**)	72 h	OECD 305	BCF =<54	ECHA
Fish - Lepomis macrochirus (**EDTA4Na**)	28 days	-	BCF = 1…2	ECHA

The potential for bioaccumulation of substance **B** is therefore considered to be minimal. Substance **C** will depurate very rapidly. These results were expected given the low log Pow value and the high water solubility of **C**. **EDTA4Na** does not significantly accumulate in organisms.

12.4. Mobility in soil:

Known or predetermined prevalence in environmental compartments:

If product is released to environment, its ingridients will end up in environment in propotions mentioned below:

Environment	Substance (A)	EDTA4Na
Air	0 %	0 %
Water	99.5 %	100 %
Soil	0.016 %	0 %
Sediment	0.016 %	0 %
Suspended sediment	0 %	0 %
Biota	0 %	0 %
Aerosol	0 %	0 %

Over time, the product will most likely distribute into water.

Surface tension: Not measured

Adsorption / Desorption:

Spreading environment	Mode of transport	Method	Result value	Remark
Soil – water (**Substance B**)	Absorbption	OECD 106	*Koc*: 142.44 (20°C)	ECHA
Soil – water (**Substance D**)	Adsorbption	OECD 106	*Koc*: 2413 (20°C)	TOXNET

Henry's law constant is 0.005 Pa*m^3/mol at 20°C (**Substance C**);
Henry's law constant is 0.03 Pa*m^3/mol at 25°C (**Substance B**).

According to the US EPA classification scheme, substance **C** is considered highly mobile. However, due to its rapid biodegradation in soil (half-life is 6.5 hours), it is unlikely that mobility will be an environmental concern.

EDTA4Na. Due to the ionic structure under environmental relevant pH conditions, no adsorption onto the organic fraction of soil or sediments is expected. This is confirmed by experimental results where **EDTA4Na** was almost entirely present in the form of negatively-charged complexes with alkaline earth and trace metals, and neither of these

complexes nor the free or protonated ligand itself could have been significantly adsorbed on the surfaces of the solids.

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. No PBT and vPvB assessment has been conducted since product is not in the list of (EC) No 1907/2006, Annex XIII.

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 scrubber, but take extra care. Collection of small and medium amounts of product: Place in a collection container for halogen free aqueous solutions. Collection vessels must be clearly labelled with a systematic description of their contents. Collection vessels must be grounded. 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 from product packaging must be handed over to waste management companies. Contact nearest waste disposal facility for further instructions.

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:

07 01 01 - Aqueous washing liquids and mother liquors (AH – absolute hazard);
15 01 02 - Plastic packaging (MNH – mirror non hazardous);
15 01 10 - Packaging containing residues of or contaminated by hazardous substances (MH – mirror hazardous);
20 01 29 - Detergents containing hazardous substances (MH – mirror hazardous);

These codes are only indicative, as it depends on the intended use by the user.

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 applicable.

14.6. Special precautions for users:

ADR:	Not applicable.
IMDG:	Not applicable.
ICAO-TI/IATA-DGR:	Not applicable.
ADN:	Not applicable.
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;
- Regulation (EC) **No. 648/2004** of the European Parliament and of the Council of 31 March 2004 on detergents;
- **2014/955/EU:** Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council Text with EEA relevance.

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: **08.05.2011.**
Date of revision: **29.11.2019.**
Version: **3.0.**

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

A – Alcohols, C12-14, ethoxylated, sulfates, sodium salts;
B – Sodium tripolyphosphate ($Na_5O_{10}P_3$);
C – Mixture of 2-Methyl-2H-isothiazolin-3-one and 5-Chloro-2-methyl-2H-isothiazolin-3-one;
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;
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;
LDLo – Lowest lethal dose;
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.