SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 15-Jul-2025 **Effective date** 12-Aug-2025 **Revision Number** 2

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

1.1. Product identifier

Product Code(s) SDS-00002

Product Name Refractrol

PR No

Product description	Product Code(s)
Refractrol Low	84652
Refractrol Normal	84653
Refractrol High	84654
Refractrol Low 6.0	84679
Refractrol High 9.0	84655

Form Not applicable

Pure substance/mixture Mixture

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

Recommended use In Vitro Diagnostic Use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Clinical Diagnostics, Inc
37 Birch Street
Milford, MA 01757
Phone #: (508) 244-6400
US Toll Free: (800) 676-1881
Fax #: (508) 634-3394
www.seracare.com

For further information, please contact

E-mail address CDx-CustomerService@LGCGroup.com

1.4. Emergency telephone number

Emergency Telephone

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)
Account number: CCN12505

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**
Austria	No information available
Belgium	No information available
Bulgaria	No information available
Croatia	No information available
Cyprus	No information available
Czech Republic	No information available
Denmark	No information available
Finland	No information available
France	No information available
Germany	No information available
Hungary	No information available
Ireland	No information available
Italy	No information available
Lithuania	No information available
Luxembourg	No information available
Netherlands	No information available
Norway	No information available
Poland	No information available
Portugal	No information available
Romania	No information available
Slovakia	No information available
Slovenia	No information available
Spain	No information available
Sweden	No information available
Switzerland	No information available
United Kingdom	No information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].
EUH210 - Safety data sheet available on request.

2.3. Other hazards

No information available.

PBT & vPvB This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

Chemical name	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances
Polyethylene glycol	-	-
Ethanol	-	-
Sodium chloride	-	-
Sodium fluoride	-	-

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical nature Biological standards.

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
Polyethylene glycol 25322-68-3	10 - 20	-	-	-	-	-	-	-
Ethanol 64-17-5	3 - <5	-	200-578-6	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319)	-	-	-	-
Albumins, blood serum	0.1 - 1	-	232-936-2	-	-	-	-	-

9048-46-8								
Sodium chloride 7647-14-5	0.1 - 1	-	231-598-3	-	-	-	-	-
Sodium fluoride 7681-49-4	0.1 - 1	-	231-667-8 (009-004-00-7)	Acute Tox. 3 (H301) Acute Tox. 2 (H310) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) (EUH032)	-	-	-	-

- Substances contained in this mixture with No registration number are under the REACH threshold in Article 6(1) and not subject to the registration requirements according to REACH Title II

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

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Polyethylene glycol 25322-68-3	22000	20000	No data available	No data available	No data available
Ethanol 64-17-5	7060	No data available	116.9 133.8	No data available	No data available
Sodium chloride 7647-14-5	3550	10010	No data available	No data available	No data available
Sodium fluoride 7681-49-4	52	175	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

Additional information
BSL1 BSL2

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Rinse mouth.

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

Symptoms	No information available.
Effects of Exposure	No information available.

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

Note to doctors	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep/store only in original container.

Storage class (TRGS 510) LGK 6.2.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Polyethylene glycol 25322-68-3	-	TWA: 1000 mg/m^3 STEL 4000 mg/m^3	-	-	-
Ethanol 64-17-5	-	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL 2000 ppm STEL 3800 mg/m^3	TWA: 1000 ppm TWA: 1907 mg/m^3	TWA: 1000 mg/m^3	TWA: 1000 ppm TWA: 1900 mg/m^3
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m^3	-	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Polyethylene glycol 25322-68-3	-	-	TWA: 1000 mg/m^3 STEL: 2000 mg/m^3 average molecular weight of 200-600	-	-
Ethanol 64-17-5	-	TWA: 1000 mg/m^3 Ceiling: 3000 mg/m^3	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL: 2000 ppm STEL: 3800 mg/m^3	TWA: 500 ppm TWA: 1000 mg/m^3 STEL: 1000 ppm STEL: 1900 mg/m^3	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL: 1300 ppm STEL: 2500 mg/m^3
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 Ceiling: 5 mg/m^3	TWA: 2.5 mg/m^3 STEL: 5 mg/m^3 except those mentioned elsewhere in the list	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Polyethylene glycol 25322-68-3	-	TWA: 200 mg/m^3	TWA: 250 mg/m^3 Peak: 500 mg/m^3	-	-
Ethanol 64-17-5	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL: 5000 ppm STEL: 9500 mg/m^3	TWA: 200 ppm TWA: 380 mg/m^3	TWA: 200 ppm TWA: 380 mg/m^3 Peak: 800 ppm Peak: 1520 mg/m^3	TWA: 1000 ppm TWA: 1900 mg/m^3	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL: 2000 ppm STEL: 3800 mg/m^3
Sodium fluoride 7681-49-4	TWA: 2 mg/m^3	TWA: 1 mg/m^3	TWA: 1 mg/m^3 Sk*	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 Sk*
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Ethanol 64-17-5	STEL: 1000 ppm	-	STEL: 1000 ppm STEL: 1884 mg/m^3	TWA: 1000 mg/m^3	TWA: 500 ppm TWA: 1000 mg/m^3 STEL: 1000 ppm STEL: 1900 mg/m^3
Sodium chloride 7647-14-5	-	-	-	TWA: 5 mg/m^3	TWA: 5 mg/m^3
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m^3 STEL: 7.5 mg/m^3	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3	TWA: 0.2 mg/m^3 STEL: 1 mg/m^3	TWA: 2.5 mg/m^3
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Ethanol 64-17-5	-	-	TWA: 137 ppm TWA: 260 mg/m^3	TWA: 500 ppm TWA: 950 mg/m^3	TWA: 1900 mg/m^3

			STEL: 1000 ppm STEL: 1900 mg/m^3 Sk*	STEL: 625 ppm STEL: 1187.5 mg/m^3	
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m^3	-	STEL: 2 mg/m^3	TWA: 0.5 mg/m^3 STEL: 1.5 mg/m^3	TWA: 2 mg/m^3

Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Polyethylene glycol 25322-68-3	-	-	TWA: 1000 mg/m^3	TWA: 1000 mg/m^3 STEL: 8000 mg/m^3	-
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 STEL: 5000 ppm STEL: 9500 mg/m^3	TWA: 500 ppm TWA: 960 mg/m^3 Ceiling: 1920 mg/m^3	TWA: 960 mg/m^3 TWA: 500 ppm STEL: 1000 ppm STEL: 1920 mg/m^3	STEL: 1000 ppm STEL: 1910 mg/m^3
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3	TWA: 2.5 mg/m^3 STEL: 10 mg/m^3 Sk*	TWA: 2.5 mg/m^3

Chemical name	Sweden	Switzerland	United Kingdom
Polyethylene glycol 25322-68-3	-	TWA: 500 mg/m^3	-
Ethanol 64-17-5	NGV: 500 ppm NGV: 1000 mg/m^3 Vägledande KGV: 1000 ppm Vägledande KGV: 1900 mg/m^3	TWA: 500 ppm TWA: 960 mg/m^3 STEL: 1000 ppm STEL: 1920 mg/m^3	TWA: 1000 ppm TWA: 1920 mg/m^3 STEL: 3000 ppm STEL: 5760 mg/m^3
Sodium fluoride 7681-49-4	NGV: 2 mg/m^3	-	TWA: 2.5 mg/m^3 STEL: 7.5 mg/m^3

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Sodium fluoride 7681-49-4	-	Check 4 mg/g Creatinine (urine - before following shift) 7 mg/g Creatinine (urine - immediately after exposure or end of the shift)	-	8 mg/g Creatinine - urine (Fluorides) - at the end of the work shift 4.0 mg/g Creatinine - urine (Fluorides) - before the start of the work shift in the middle of the week	-

Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Sodium fluoride 7681-49-4	-	-	- urine (Fluorides) - beginning of shift - urine (Fluorides) - end of shift	4.0 mg/g Creatinine (urine - Fluoride end of shift)	4.0 mg/g Creatinine (urine - Fluoride end of shift)

Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII
Sodium fluoride 7681-49-4	7 mg/g Creatinine (urine - Fluoride end of shift) 4 mg/g Creatinine (urine	2 mg/L (urine - Fluoride prior to shift) 3 mg/L (urine - Fluoride	-	2 mg/g Creatinine - urine (Fluorides) - prior to shift

	- Fluoride prior to next shift) 42 µmol/mmol Creatinine (urine - Fluoride end of shift) 24 µmol/mmol Creatinine (urine - Fluoride prior to next shift)	end of shift)		3 mg/g Creatinine - urine (Fluorides) - end of shift
Chemical name	Latvia	Luxembourg	Romania	Slovakia
Sodium fluoride 7681-49-4	-	-	5 mg/g Creatinine - urine (Fluorine) - end of shift	-
Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Sodium fluoride 7681-49-4	7.0 mg/g Creatinine - urine (Fluoride) - at the end of the work shift 4.0 mg/g Creatinine - urine () - before the next working day	-	-	-

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Polyethylene glycol 25322-68-3	-	112 mg/kg bw/day [4] [6]	40.2 mg/m^3 [4] [6]
Ethanol 64-17-5	-	343 mg/kg bw/day [4] [6]	950 mg/m^3 [4] [6] 1900 mg/m^3 [5] [7]
Methyl 4-hydroxybenzoate 99-76-3	-	9.8 mg/kg bw/day [4] [6]	58.76 mg/m^3 [4] [6]
Sodium chloride 7647-14-5	-	295.52 mg/kg bw/day [4] [6] 295.52 mg/kg bw/day [4] [7]	2068.62 mg/m^3 [4] [6] 2068.62 mg/m^3 [4] [7]
Sodium fluoride 7681-49-4	-	0.36 mg/kg bw/day [4] [6] 0.36 mg/kg bw/day [4] [7]	2.5 mg/m^3 [4] [7] 2.5 mg/m^3 [5] [6]
Sodium hydroxide 1310-73-2	-	-	1 mg/m^3 [5] [6]

Notes

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Polyethylene glycol 25322-68-3	40 mg/kg bw/day [4] [6]	-	7.14 mg/m^3 [4] [6]
Ethanol 64-17-5	87 mg/kg bw/day [4] [6]	-	114 mg/m^3 [4] [6] 950 mg/m^3 [5] [7]
Methyl 4-hydroxybenzoate 99-76-3	4.16 mg/kg bw/day [4] [6]	-	14.49 mg/m^3 [4] [6]
Sodium chloride 7647-14-5	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	443.28 mg/m^3 [4] [6] 443.28 mg/m^3 [4] [7]
Sodium hydroxide 1310-73-2	-	-	1 mg/m^3 [5] [6]

Notes

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Polyethylene glycol 25322-68-3	0.273 g/L	1 mg/L	27.3 mg/L	0.1 mg/L	-
Methyl 4-hydroxybenzoate 99-76-3	2.4 µg/L	0.112 mg/L	0.24 µg/L	-	-
Sodium chloride 7647-14-5	5 mg/L	-	-	-	-
Sodium fluoride 7681-49-4	0.9 mg/L	-	-	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Polyethylene glycol 25322-68-3	1030 mg/kg sediment dw	103 mg/kg sediment dw	-	46.4 mg/kg soil dw	-
Sodium nitrate 7631-99-4	-	-	18 mg/L	-	-
Methyl 4-hydroxybenzoate 99-76-3	63.2 µg/kg sediment dw	6.32 µg/kg sediment dw	2 mg/L	11.5 µg/kg soil dw	-
Sodium chloride 7647-14-5	-	-	500 mg/L	4.86 mg/kg soil dw	-
Sodium fluoride	-	-	51 mg/L	11 mg/kg soil dw	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
7681-49-4					

8.2. Exposure controls

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Latex gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Physical state	Liquid
Colour	clear
Odour	No information available
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	

Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
No information available

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics
Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Acute toxicity Based on available data, the classification criteria are not met.
Numerical measures of toxicity
The following values are calculated based on chapter 3.1 of the GHS document:
ATEmix (oral) 43,333.30 mg/kg
ATEmix (dermal) 145,833.30 mg/kg
ATEmix (inhalation-gas) 99,999.00 ppm
ATEmix (inhalation-vapour) 99,999.00 mg/l
ATEmix (inhalation-dust/mist) 99,999.00 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Polyethylene glycol	= 22 g/kg (Rat)	> 20 g/kg (Rabbit)	-
Ethanol	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h

			= 133.8 mg/L (Rat) 4 h
Sodium chloride	= 3550 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat) 1 h
Sodium fluoride	= 52 mg/kg (Rat)	= 175 mg/kg (Rat)	-

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

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

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

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

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: 13400 - 15100mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)
Sodium chloride	-	LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: =7050mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss)	-	EC50: =1000mg/L (48h, Daphnia magna) EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)
Sodium fluoride	EC50: =272mg/L (96h, Pseudokirchneriella subcapitata) EC50: =850mg/L (72h, Desmodesmus subspicatus)	LC50: >530mg/L (96h, Lepomis macrochirus) LC50: =830mg/L (96h, Lepomis macrochirus) LC50: 38 - 68mg/L (96h, Oncorhynchus mykiss) LC50: =180mg/L (96h, Pimephales promelas)	-	EC50: =338mg/L (48h, Daphnia magna) EC50: =98mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Chemical name	Partition coefficient
Ethanol	-0.35

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment Based on available data, the classification criteria are not met.

Chemical name	PBT and vPvB assessment
Polyethylene glycol	The substance is not PBT / vPvB
Ethanol	The substance is not PBT / vPvB
Sodium chloride	The substance is not PBT / vPvB
Sodium fluoride	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN3373

14.2 UN proper shipping name Biological substance, Category B

14.3 Transport hazard class(es) 6.2

14.4 Packing group Not regulated

Description UN3373, Biological substance, Category B, 6.2

14.5 Environmental hazards No

14.6 Special precautions for user

Special Provisions	None
ERG Code	11L

IMDG

14.1 UN number or ID number	UN3373
14.2 UN proper shipping name	Biological substance, category B
14.3 Transport hazard class(es)	6.2
14.4 Packing group	Not regulated
Description	UN3373, Biological substance, category B, 6.2
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	319, 341
EmS-No.	F-A, S-T
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN3373
14.2 UN proper shipping name	Biological substance, category B
14.3 Transport hazard class(es)	6.2
14.4 Packing group	Not regulated
Description	UN3373, Biological substance, category B, 6.2
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	319
Classification code	I4

ADR

14.1 UN number or ID number	UN3373
14.2 UN proper shipping name	Biological substance, category B
14.3 Transport hazard class(es)	6.2
14.4 Packing group	Not regulated
Description	UN3373, Biological substance, category B, 6.2, (-)
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	319
Classification code	I4
Tunnel restriction code	(-)

ADN

14.1 UN number or ID number	UN3373
14.2 UN proper shipping name	Biological substance, category B
14.3 Transport hazard class(es)	6.2
14.4 Packing group	Not regulated
Description	UN3373, Biological substance, category B, 6.2
14.5 Environmental hazard	No
14.6 Special precautions for user	

Special Provisions	319
Classification code	I4
Equipment Requirements	PP

SECTION 15: Regulatory information

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

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Ethanol 64-17-5	RG 84	-
Sodium chloride 7647-14-5	RG 78	-
Sodium fluoride 7681-49-4	RG 32	-

Germany

Water hazard class (WGK)	slightly hazardous to water (WGK 1)
Chemical Prohibition Ordinance (ChemVerbotsV)	This product is subject to requirements and restrictions regarding handling and delivery

Chemical name	Chemical Prohibition Ordinance (ChemVerbotsV)
Ethanol 64-17-5	1.2

TA Luft (German Air Pollution Control Regulation)

Chemical name	Number	Class
Sodium fluoride	5.2.4 5.2.2	Class III Class II

TRGS 905 Not applicable

Netherlands
Carcinogenic, mutagenic and reproductive toxic effects

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Ethanol - 64-17-5	Present	-	Fertility Category 1A Development Category 1A Can be harmful via breastfeeding

Switzerland

Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Group I
Storage of Hazardous Material SC Non-hazardous material
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Class B
Major Accidents Ordinance SR 814.012 Not applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Sodium fluoride - 7681-49-4	75	

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 2024/590

Not applicable

EU - Plant Protection Products (1107/2009/EC)

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Sodium chloride - 7647-14-5	Plant protection agent

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Ethanol - 64-17-5	Product-type 1: Human hygiene Product-type 2:

	Disinfectants and algaecides not intended for direct application to humans or animals Product-type 4: Food and feed area
Sodium chloride - 7647-14-5	Product-type 1: Human hygiene

International Inventories

TSCA	LGC, to the best of its ability, has confirmed that the chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021."
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15
H225 - Highly flammable liquid and vapour
H301 - Toxic if swallowed
H310 - Fatal in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
Legend

ACGIH	American Conference of Governmental Industrial Hygienists
AIDII	Italian Association of Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DFG	German Research Foundation
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
EWC	European Waste Codes
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MAL	Measuring Technical Hygienic Air Needs
MARPOL	International Convention for the Prevention of Pollution from Ships
MDLPS	Ministry of Labour and Social Policy
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals

OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
Sen+	Sensitiser
Sk*	Skin designation
**	Hazard Designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method

STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet