

SAFETY DATA SHEET

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Version number: 1

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

- 1.1 Product identifier** **Milk Cryoscope Standard**
STD 422, 530, 621
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Calibration solutions for analytical instrument used in the dairy industry.
Uses advised against: not available.
- 1.3 Details of the supplier of the safety data sheet** QCL, Riverside, Forest Row Business Park, Forest Row, East Sussex, RH18 5DW, UK; Tel: 01342 820 820; Fax: 01342 820 825; sales@qclscientific.com; www.qclscientific.com.
- 1.4 Emergency telephone number** QCL 01342 820 820 (9 am to 5 pm, Mon to Fri).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No. 1272/2008, and it is not mandatory to supply a safety data sheet, but this document contains information and advice concerning safe handling of the product.

2.2 Label elements

Signal word None.

Hazard statements None.

Precautionary statements None.

Supplemental information None.

2.3 Other hazards Not identified.

SECTION 3: Composition/information on ingredients

3.2 Mixtures ^a

Declarable components	Conc. (wt%)	EC No.	CAS No.	REACH Reg. No.	Classification
None.					
<i>Other components</i>					
Water	> 95	231-791-2	7732-18-5	NA	Not classified
Sodium chloride	< 5	231-598-3	7647-14-5	NA	Not classified

^a NA: not available.

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SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation	Not expected to cause adverse effects by inhalation. For breathing difficulty, respiratory irritation, or other symptoms, get medical attention.
Skin	Not expected to cause adverse effects by skin contact. If irritation occurs, remove contaminated clothing and rinse affected area water. Get medical attention. Wash contaminated clothing before re-use.
Eye	Not expected to cause adverse effects by eye contact. If irritation occurs, irrigate with room-temperature water or eyewash solution for several minutes, occasionally lifting eyelids. Get medical attention if irritation persists.
Ingestion	If swallowed, rinse mouth thoroughly and give water to drink. Get prompt medical attention for any adverse effects. Do not induce vomiting, unless instructed by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed Not expected to cause adverse effects during foreseeable use.

4.3 Indication of any immediate medical attention and special treatment needed Treat symptoms as they occur.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable	Product is water-based and non-flammable. Use extinguishing media appropriate to cause of the fire, and the surroundings.
Unsuitable	None.

5.2 Special hazards arising from the substance or mixture None.

5.3 Advice for firefighters Remove containers from fire or cool them with water spray. For larger fires, firefighters should wear breathing apparatus and protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Product is water-based and not classified as hazardous. For large spills, wear personal protection. Product spills may be slippery. Follow prescribed procedures for responding to large spills and reporting to appropriate authorities.

6.2 Environmental precautions Product is water-based and not classified as hazardous to the environment.

6.3 Methods and material Clean up spill as soon as possible.

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for containment and cleaning up	For small quantities, wipe off with damp cloth or paper, and wash affected area with water. For large quantities, absorb with an inert material (eg sand, vermiculite). Wash contaminated surfaces with water. Collect spill, contaminated materials, and washings in a container for disposal.
6.4 Reference to other sections	For recommended personal protective equipment, see Section 8. For disposal considerations, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Avoid skin and eye contact with the product, using measures as described in Section 8.
7.2 Conditions for safe storage, including any incompatibilities	Store in a cool place away from direct sunlight.
7.3 Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

EU limit values	None.
UK limit values	None.
Monitoring procedure	Not applicable.
Other: human health (DNELs, DMELs)	Sodium chloride: DNELs: workers, long-term exposure, systemic effects, dermal, 296 mg/kg/day; workers, short-term exposure, systemic effects, dermal, 296 mg/kg/day; workers, long-term exposure, systemic effects, inhalation, 2068 mg/m ³ .
Other: environmental (PNEC)	Sodium chloride: PNECs: freshwater, 5 mg/L; sewage treatment plant, 500 mg/L; soil, 4.86 mg/kg dry soil.

8.2 Exposure controls

Engineering controls	Engineering controls are not required for typical professional use.
Personal protective equipment	We recommend chemical-resistant gloves (eg nitrile rubber, PVC) and eye protection. For professional use, the need for personal protective equipment should be based on a workplace risk assessment for the particular use. Where more extensive contact may occur, wear protective clothing (eg lab coat, apron). PPE should be to European (EN) standards. Consult manufacturers concerning breakthrough times.
Environmental exposure controls	Not available.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Clear, colourless liquid
Odour	None
Odour threshold	Not available
pH	4.5 to 7 at 20 °C
Melting/freezing point	Not available (0 °C for water)
Initial boiling point/range	Not available (100 °C for water)
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Flamm. or expl. limits	Not available
Vapour pressure	Not available (2310 Pa at 20 °C for water)
Vapour density	Not available
Relative density	Not available
Solubilities	In water: product: miscible in all proportions
Partition coeff. (log K_{ow})	Not available
Auto-ignition temp.	Not available
Decomposition temp.	Not available
Viscosity	Not available
Explosive properties	Not classified as explosive
Oxidising properties	Not classified as oxidising

9.2 Other information Not available

SECTION 10: Stability and reactivity

10.1 Reactivity	Not available.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous reactions	Not available.
10.4 Conditions to avoid	Not available.
10.5 Incompatible materials	Not available.
10.6 Hazardous decomposition	Not available.

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SECTION 11: Toxicological information
11.1 Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met for the oral, dermal or inhalation routes. Sodium chloride: LD ₅₀ (oral; rat), 3000 mg/kg; LD ₅₀ (skin; rabbit), >10 000 mg/kg; LC ₅₀ (inhalation; 1 h; rat), >42 000 mg/m ³ . Absorbed rapidly through the gastrointestinal tract. Aqueous solutions cause vomiting starting at concentrations of about 10 g/l. Very high doses lead to gastrointestinal and metabolic disturbances, with secondary effects to the functions of organs. Skin absorption is not considered to be a relevant pathway.
Skin corrosion/irritation	Based on available data, the classification criteria are not met. Sodium chloride: mild irritation to the skin.
Serious eye damage/irritation	The product is not expected to meet the criteria for classification. Sodium chloride: possible mild irritation and stinging. A 20% solution was not irritating (rabbit test; irritation index 0 on a scale up to 110). Aqueous solutions from 0.9 to 10% do not have any effect on the permeability of the cornea.
Respiratory or skin sensitisation	Respiratory sensitisation: no expectation of respiratory sensitisation potential. 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. Sodium chloride: no indications of mutagenic effects.
Carcinogenicity	Based on available data, the classification criteria are not met. Sodium chloride: no indications of carcinogenic effects.
Reproductive toxicity	Based on available data, the classification criteria are not met. Sodium chloride: no indications of developmental toxicity or effects on fertility in humans.
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. Sodium chloride: Usual intake by adults in Europe in their food is estimated to be 8 to 10 g/d. An animal study (rat; feed containing 4% sodium chloride; 2 years) showed inflammation and ulcerous lesions in the stomach, and damage to the kidneys and arteries. Prolonged and repeated skin contact with solid or concentrated solutions can cause ulcerous skin inflammation.
Aspiration hazard	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information
12.1 Toxicity The product is not expected to meet the criteria for classification.

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	Sodium chloride: LC ₅₀ (freshwater fish, 96 h), 1000 to 21 400 mg/L; EC ₅₀ (crustacea, 48 h), 403 to 2120 mg/L.
12.2 Persistence and degradability	Not applicable. Product is inorganic salt in aqueous solution.
12.3 Bioaccumulative potential	Not bioaccumulative.
12.4 Mobility in soil	Not available.
12.5 Results of PBT and vPvB assessment	Sodium chloride: not PBT or vPvB.
12.6 Other adverse effects	Not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Product is an aqueous salt solution, and small quantities may be diluted and disposed of via the drains. Landfill may be appropriate for large quantities. Incineration is not recommended. Disposal must be in accordance with current national and local regulations. Chemical residues generally count as special waste. General EU requirements are given in Directive 2008/98/EC.
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SECTION 14: Transport information

14.1 UN Number	Not classified as dangerous goods for transport.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	Not classified as marine pollutant/environmentally hazardous.
14.6 Special precautions for user	Not available.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	<i>UK:</i> Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended (also implementing 90/394/EEC on carcinogens at work). COSHH Essentials: Easy Steps to Control Chemicals; HSE Books 2003 (also available on the HSE web site). Workplace Exposure Limits EH40/2005 (Third edition, 2018); Health and Safety Executive.
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15.2 Chemical safety assessment Not available.

SECTION 16: Other information

Revisions	This SDS is the first version in EU CLP format.
Abbreviations	DNEL, derived no-effect level; DMEL, derived minimum effect level; EC, effect concentration; LC, lethal concentration; LD, lethal dose; PBT, persistent, bioaccumulative, and toxic; PNEC, predicted no-effect concentration; STOT RE, specific target organ toxicity repeated exposure; STOT SE, specific target organ toxicity single exposure; vPvB, very persistent, very bioaccumulative.
References	Search for chemicals; available at the European Chemicals Agency website: http://echa.europa.eu/ . GESTIS Substance Database; Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA); http://www.dguv.de/ifa/GESTIS/index-2.jsp .
Basis of classification	The mixture is self-classified from available information on the ingredients.
List of hazard statements	None.

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