

SAFETY DATA SHEET

(SDS)

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008, (EU) No. 453/2010

Revision Date 16-Sep-2024

WAI2 - EGHS - EUROPEAN

Revision Number 1

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name	ECRE002, Eutech 4M KCl (Potassium Chloride) saturated Solution
Product No	01X211218
Unique Formula Identifier (UFI)	Not applicable
REACH registration number	Not applicable
Pure substance/mixture	Mixture

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

Recommended Use	Use as laboratory reagent
Uses advised against	No Information available

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier	Eutech Instruments Pte Ltd part of Thermo Fisher Scientific 7 Gul Circle, #2M-01 Keppel Logistics Building Singapore 629563
E-mail address	wlp.techsupport@thermofisher.com
Made in	Singapore

<u>1.4. Emergency telephone number</u>	24 Hour Emergency Phone Number CHEMTREC® Within USA and Canada: 1-800-424-9300 Outside USA and Canada: 1-703-527-3887 (collect calls accepted)
---	--

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - Mixture

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

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

2.2. Label elements

None

Signal Word

None

Hazard Statements

None

Precautionary Statements

None

2.3. Other hazards

General Hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	EC No	CAS No	Weight %	CLP Classification - Regulation (EC) No 1272/2008	REACH Reg. No
Water	EEC No. 231-791-2	7732-18-5	80 - 90%	Not classified	No information available
Potassium chloride	EEC No. 231-211-8	7447-40-7	10 - 20%	Not classified	No information available

Component	CAS No	Specific concentration limits (SCL's)	M-Factor	Component notes
Water	7732-18-5	-	-	-
Potassium chloride	7447-40-7	-	-	-

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Self-Protection of the First Aider	No special precautions required.

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

Most important symptoms and effects	None reasonably foreseeable
-------------------------------------	-----------------------------

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

Notes to Physician	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.

Unsuitable Extinguishing Media

No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required.
----------------------	---

6.2. Environmental precautions

Environmental Precautions	Should not be released into the environment. 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 Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Reference to Other Sections

Refer to protective measures listed in Sections 7 and 8

See Section 8 for information on appropriate personal protective equipment

See Section 12 for additional Ecological Information

See Section 13 for additional waste treatment information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Protect from direct sunlight.

7.3. Specific end use(s)

Specific Use(s)

Use as laboratory reagent

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

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Potassium chloride	TWA: 5.0 mg/m ³				

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Potassium chloride	TWA: 5 mg/m ³	TWA: 5 mg/m ³ IPRD			

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Potassium chloride	MAC: 5 mg/m ³				

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL)

No information available

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Potassium chloride 7447-40-7 (10 - 20%)		DNEL = 910mg/kg bw/day		DNEL = 303mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Potassium chloride 7447-40-7 (10 - 20%)		DNEL = 5320mg/m ³		DNEL = 1064mg/m ³

Predicted No Effect Concentration (PNEC)

No information available.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Potassium chloride 7447-40-7 (10 - 20%)	PNEC = 0.1mg/L		PNEC = 1mg/L	PNEC = 10mg/L	

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Potassium chloride 7447-40-7 (10 - 20%)	PNEC = 0.1mg/L				

8.2. Exposure controls

Engineering Measures None under normal use conditions

Personal protective equipment

Eye/face Protection Wear chemical splash goggles and face shield. If splashes are likely to occur:. Goggles.

Skin and body protection Wear protective gloves/protective clothing.

Respiratory Protection No protective equipment is needed under normal use conditions.
Recommended Filter type: Particle filter.

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear

Odor	Odorless
Odor Threshold	No information available
PH Range	6-7 @ 25 °C

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point (High in °C)	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	-	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Softening Point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density	1.0 g/cm ³ @ 25°C
Bulk Density	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No information available

10.2. Chemical stability

Stable under normal conditions

Explosion Data

Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

10.3. Possibility of hazardous reactions

None under normal processing

10.4. Conditions to avoid

Extremes of temperature and direct sunlight

10.5. Incompatible materials

No information available

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

Acute Toxicity

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Potassium chloride	LD50 = 2600 mg/kg (Rat)		

Skin Corrosion/Irritation No information available

Serious eye damage/eye irritation No information available

Sensitization No information available

Mutagenic Effects No information available

Carcinogenic effects No information available

Reproductive Effects No information available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs None known.

Aspiration hazard No information available

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium chloride	EC50: = 2500 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 1060 mg/L, 96h static (Lepomis macrochirus) LC50: 750 - 1020 mg/L, 96h static (Pimephales promelas)	EC50: = 83 mg/L, 48h Static (Daphnia magna) EC50: = 825 mg/L, 48h (Daphnia magna)

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

No information available

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Improper disposal or reuse of this container may be dangerous and illegal.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN-No	Not Regulated
14.2 Proper Shipping Name	Not Regulated
14.3 Hazard Class	Not Regulated
14.4 Packing Group	Not Regulated
14.5 Marine Pollutant	Not Applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

ADR

14.1. UN number	Not Regulated
14.2. UN proper shipping name	Not Regulated
14.3. Transport hazard class(es)	Not Regulated
14.4. Packing group	Not Regulated

ICAO

14.1 UN-No	Not Regulated
14.2 Proper Shipping Name	Not Regulated
14.3 Hazard Class	Not Regulated
14.4 Packing Group	Not Regulated
14.5 Environmental hazard	Not Applicable
14.6 Special Provisions	None

IATA

14.1 UN-No	Not Regulated
14.2 Proper Shipping Name	Not Regulated

14.3 Hazard Class	Not Regulated
14.4 Packing Group	Not Regulated
14.5 Environmental hazard	Not Applicable
14.6 Special Provisions	None

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS), U.S.A. (TSCA).

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	X	X	KE-35400	X	-
Potassium chloride	7447-40-7	231-211-8	-	-	X	X	KE-29086	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Water	7732-18-5	X	ACTIVE	X	-	X	X	X
Potassium chloride	7447-40-7	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

European Union

Authorisation/Restrictions according to EU REACH

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Potassium chloride	7447-40-7	-	-	-

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

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

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 2 (self classification)

Component	Germany - Water Classification (AwSV)
Potassium chloride 7447-40-7 (10 - 20%)	WGK1

Component	France - INRS (Tables of occupational diseases)
Potassium chloride	Tableaux des maladies professionnelles (TMP) - RG 67

Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

15.2. Chemical safety assessment

A Chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

SECTION 16: OTHER INFORMATION

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

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

TWA TWA (time-weighted average)

Ceiling Maximum limit value

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (volatile organic compound)

STEL STEL (Short Term Exposure Limit)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Prepared By Regulatory Affairs

Prepared For Thermo Fisher Scientific Inc.

Issue Date No information available

Revision Date 16-Sep-2024

Reason for revision SDS sections updated.

Training Advice Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No
1907/2006**

Disclaimer

IMPORTANT: The information contained in this SDS is correct to the best of our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties of any kind as to the accuracy or completeness of the information contained herein or the merchantability or fitness of the product or this information for a particular purpose. It is the responsibility of each individual buyer/user to determine the suitability of this information and the product for its intended purposes. Product sales are subject to Thermo Fisher Scientifics standard terms and conditions of sale. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions, or is altered in any way. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable government requirements. Since conditions of use of the product are not under direct control of Thermo Fisher Scientific, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Thermo Fisher Scientific will not be liable for any injuries or damages resulting from handling, use, misuse or contact with the product.

End of Safety Data Sheet