

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006, as retained and amended in UK law [UK REACH]

Revision date: 30/11/2023
Version: 9.0
Replaces version: 8.0
Language: en-GB
Date of print: 4/12/2023

Refrifluid 1

Material number E701240x

Page: 1 of 10

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

1.1 Product identifier

Trade name: Refrifluid 1

This safety data sheet pertains to the following products:

E7012402: 25 L

E7012404: 50 L

E7012406: 100 L

UFI: KD10-80TF-400K-EJQ6

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

General use: Heat transfer fluids.
Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company name: Lauda Dr. R. Wobser GmbH & Co. KG

Street/POB-No.: Laudaplatz 1

Postal Code, city: 97922 Lauda-Königshofen

Germany

WWW: www.lauda.de

E-mail: info@lauda.de

Telephone: +49 (0)9343-503-0

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Department responsible for information:

Department Quality Management,
Telephone: +49 9343 503-331, e-mail info@lauda.de

1.4 Emergency telephone number

National Poisons Information Service (Birmingham Unit)

Telephone: 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Repr. 1B; H360 May damage fertility or the unborn child.

STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (CLP)



Signal word: **Danger**

Hazard statements: H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

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Precautionary statements:	P201	Obtain special instructions before use.
	P260	Do not breathe mist/vapours.
	P280	Wear protective gloves/protective clothing/eye protection.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P501	Dispose of contents/container to hazardous or special waste collection point.

Special labelling

Text for labelling: Contains: ethylene glycol, Sodium 2-ethylhexanoate
Restricted to professional users.

2.3 Other hazards

Further hazardous properties cannot be excluded.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% (w/w) or higher.

The product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119456816-28-xxxx EC No. 203-473-3 CAS 107-21-1	Ethylene glycol Acute Tox. 4; H302. STOT RE 2; H373.	10 - 25 %
EC No. 243-283-8 CAS 19766-89-3	Sodium 2-ethylhexanoate Repr. 1B; H360D.	< 1 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	First aider: Pay attention to self-protection! If medical advice is needed, have product container or label at hand.
In case of inhalation:	Remove person to fresh air and keep comfortable for breathing. Consult physician.
Following skin contact:	After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. In the event of discomfort seek medical treatment.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Rinse mouth and drink large quantities of water. Do not induce vomiting. Consult physician. Never give anything by mouth to an unconscious person.

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4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Product is non-combustible. Extinguishing is to be in accordance with the surrounding fire.
Water spray jet, foam, extinguishing powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Fires in the immediate vicinity may cause the development of dangerous vapours.
In the event of a fire, the following may be produced when the water evaporates: carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Hazchem-Code: -

Cool endangered containers with water jetspray. Do not allow fire water to penetrate into surface or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid exposure. Seal off endangered area. Keep unprotected people away. Provide good ventilation.
Avoid contact with the substance. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Thoroughly clean surrounding area.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Avoid contact with the substance. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Safety shower and eye wash station should be easily accessible to the work area. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Precautions against fire and explosion: Avoid unenclosed light, fire and other ignition sources.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep containers in a dry, well-ventilated and cool place. Protect from heat and direct sunlight. Store only in original container. Store carefully closed containers upright to prevent any leaks.
storage temperature: 5 - 35 °C
Shelf life: 24 months

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
107-21-1	Ethylene glycol	Great Britain: WEL-STEL	104 mg/m ³ ; 40 ppm
			(vapour, may be absorbed through the skin)
		Great Britain: WEL-TWA	10 mg/m ³ (may be absorbed through the skin)
		Great Britain: WEL-TWA	52 mg/m ³ ; 20 ppm
			(vapour, may be absorbed through the skin)

DNEL/DMEL: Information about Ethylene glycol:
DNEL long-term, workers, inhalative, local: 35 mg/m³
DNEL long-term, workers, dermal, systemic: 106 mg/kg bw/d
DNEL long-term, consumers, inhalative, local: 7 mg/m³
DNEL long-term, consumers, dermal, systemic: 53 mg/kg bw/d
Information about Sodium 2-ethylhexanoate:
DNEL long-term, workers, inhalative, systemic: 14 mg/m³
DNEL long-term, workers, dermal, systemic: 2 mg/kg bw/d
DNEL long-term, consumers, inhalative, systemic: 3.5 mg/m³
DNEL long-term, consumers, dermal, systemic: 1 mg/kg bw/d
DNEL long-term, consumers, oral, systemic: 1 mg/kg bw/d

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PNEC: Information about ethylene glycol:
PNEC water (freshwater): 10 mg/L
PNEC water (marine water): 1 mg/L
PNEC water (intermittent release): 10 mg/L
PNEC sediment (freshwater): 37 mg/kg dw
PNEC sediment (marine water): 3.7 mg/kg dw
PNEC soil: 1.53 mg/kg dw
PNEC sewage treatment plant stp: 199.5 mg/L
Information about Sodium 2-ethylhexanoate:
PNEC water (freshwater): 0.36 mg/L
PNEC water (marine water): 0.036 mg/L
PNEC water (intermittent release): 0.493 mg/L
PNEC sediment (freshwater): 0.301 mg/kg dw
PNEC sediment (marine water): 0.0301 mg/kg dw
PNEC soil: 0.0579 mg/kg dw
PNEC sewage treatment plant stp: 71.7 mg/L

8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to BS EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to BS EN 374.
Glove material: Nitrile rubber
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to BS EN ISO 16321-1:2022.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures: Obtain special instructions before use. Avoid contact with the substance. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Work place should be equipped with a shower and an eye rinsing apparatus. Take off contaminated clothing and wash it before reuse.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: liquid
Colour: transparent, pink

Odour: characteristic

Odour threshold: No data available

pH: at 20 °C: 6 - 8

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Melting point/freezing point:	No data available
Initial boiling point and boiling range:	109 °C
Flash point/flash point range:	> 60 °C
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 3.20 Vol-% UEL (Upper Explosive Limit): 15.30 Vol-%
Vapour pressure:	at 20 °C: 22.23 hPa at 50 °C: 117.16 hPa
Vapour density:	No data available
Density:	at 20 °C: 1.045 g/mL
Water solubility:	at 20 °C: completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	400 °C
Decomposition temperature:	No data available
Viscosity, dynamic:	at 20 °C: 1.22 mPa*s
Viscosity, kinematic:	at 20 °C: 1.17 mm²/s
Explosive properties:	No data available
Oxidizing characteristics:	No data available

9.2 Other information

Additional information: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to subsection "Possibility of hazardous reactions".

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Protect against heat /sun rays. Avoid unenclosed light, fire and other ignition sources.

10.5 Incompatible materials

Oxidizing agents, rust

10.6 Hazardous decomposition products

Thermal decomposition: In case of fire may be liberated: carbon monoxide and carbon dioxide
No data available

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

ATEmix calculated: > 2000 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

ATEmix calculated: > 2000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

ATEmix calculated: > 20 mg/L

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

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

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

Skin sensitisation: Based on available data, the classification criteria are not met.

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

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

Reproductive toxicity: Repr. 1B; H360 = May damage fertility or the unborn child.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.

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

Other information:

Information about ethylene glycol:

LD50 Rat, oral: 7712 mg/kg (OECD 401)

LD50 Mouse, dermal: > 3500 mg/kg (OECD 402)

LD50 Rat, inhalative (Aerosol): 2.5 mg/L/6h

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Information about ethylene glycol

Algae toxicity:

EC50 Pseudokirchneriella subcapitata (green algae): 6500 - 13000 mg/L/96h (EPA 600/9-78-018, 1978)

Daphnia toxicity:

EC50: >100 mg/L/48h (OECD 202)

Fish toxicity:

Short-term, LC50 Pimephales promelas (fathead minnow): 72860 mg/L/96h (EPA 600/4-90/027.U.S.)

Long-term, NOEC Pimephales promelas (fathead minnow): 15380 mg/L/7d (EPA 600/4-90/027.U.S.)

12.2 Persistence and degradability

Further details:

No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

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12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

The product does not contain any substances classified as PBT or vPvB.

12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 01 14* = antifreeze fluids containing hazardous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.

Package

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR: not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR: Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR: not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR: not applicable

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

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SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: -
No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:
Use restriction according to REACH annex XVII, no.: 3, 30, 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H302 = Harmful if swallowed.
H360 = May damage fertility or the unborn child.
H360D = May damage the unborn child.
H373 = May cause damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms:

- Acute Tox.: Acute toxicity
- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- AS/NZS: Australian Standards/New Zealand Standards
- CAS: Chemical Abstracts Service
- CFR: Code of Federal Regulations
- CLP: Classification, Labelling and Packaging
- DMEL: Derived minimal effect level
- DNEL: Derived no-effect level
- EC: European Community
- EC50: Effective Concentration 50%
- EN: European Standard
- EQ: Excepted quantities
- IATA: International Air Transport Association
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
- IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IMDG Code: International Maritime Dangerous Goods Code
- LC50: Median lethal concentration
- LD50: Lethal dose 50%
- LEL: Lower Explosion Limit
- MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
- OEL: Occupational Exposure Limit Value
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, bioaccumulative and toxic
- PNEC: Predicted no-effect concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- Repr.: Reproductive toxicity
- RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
- STOT RE: Specific target organ toxicity - repeated exposure
- TLV: Threshold Limit Value
- TRGS: Technical Rules for Hazardous Substances
- vPvB: Very persistent and very bioaccumulative
- WEL: Workplace Exposure Limit

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Reason of change: Changes in section 2: Classification, labelling
Changes in section 3: Composition/information on ingredients
Changes in section 7: Storage class
Changes in section 15: National regulations
General revision

Date of first version: 28/11/2012

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.