

SAFETY DATA SHEET

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

Revision date: 9/1/2023
Version: 4.0
Replaces version: 3.0
Language: en-GB
Date of print: 20/3/2023

Antifreeze

Material number LZB x25

Page: 1 of 9

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

1.1 Product identifier

Trade name: Antifreeze

This safety data sheet pertains to the following products:

LZB 125: 5 L

LZB 225: 10 L

LZB 325: 20 L

UFI: 5P20-V05D-R000-APF5

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

General use: Functional fluids, Refrigerant
Industrial use
Professional uses / Public domain

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: DE-97922 Lauda-Königshofen

WWW: www.lauda.de

E-mail: info@lauda.de

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

Telefax: +49 (0)9343-503-222

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)

Acute Tox. 4; H302 Harmful if swallowed.

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

2.2 Label elements

Labelling (CLP)



Signal word: **Warning**

Hazard statements: H302 Harmful if swallowed.

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

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Precautionary statements:	P260	Do not breathe mist/vapours/spray.
	P264	Wash hands and face thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P314	Get medical advice/attention if you feel unwell.

Special labelling

Text for labelling: Contains: ethylene glycol

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Ethane diol (ethylene glycol) and corrosion inhibitors

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.	90 - 95 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	Take off immediately all contaminated clothing.
In case of inhalation:	Remove the casualty into fresh air and keep them calm. In the events of symptoms take medical treatment.
Following skin contact:	After contact with skin, wash immediately with plenty of water. Consult a doctor if skin irritation persists.
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 immediately and drink plenty of water. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, alcohol resistant 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

In case of fire may be liberated: nitrogen oxides (NO_x), formaldehyde, hydrogen, methane, Carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical 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 the formation of aerosol. Avoid contact with the substance. Do not breathe mist/vapours/spray.

Provide adequate ventilation. Wear appropriate protective equipment. Keep unprotected people away.

Eliminate all ignition sources if safe to do so.

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. Final cleaning.

Additional information:

Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling:

Avoid the formation of aerosol. Avoid contact with the substance. Avoid contact with skin and eyes. Do not breathe mist/vapours/spray.

Provide adequate ventilation, and local exhaust as needed. Handle and open container with care. Wear appropriate protective equipment. Take off contaminated clothing. When using do not eat or drink. Wash hands before breaks and after work.

Precautions against fire and explosion:

Take care of general rules for industrial preventive fire protection.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place. Keep only in the original container.

Hints on joint storage:

Do not store together with: alkalis, strong oxidizing agents
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 workers, long-term, local, inhalative: 35 mg/m³
DNEL workers, long-term, systemic, dermal: 106 mg/kg bw/d
DNEL consumers, long-term, local, inhalative: 7 mg/m³
DNEL consumers, long-term, systemic, dermal: 53 mg/kg bw/d

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): 20.9 mg/kg dw
PNEC soil: 1.53 mg/kg dw
PNEC sewage treatment plant stp: 199.5 mg/L

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.
Transfer and handle product only in closed systems.

Personal protection equipment

Occupational exposure controls

Respiratory protection:

Respiratory protection must be worn whenever the WEL levels have been exceeded.
In the event of aerosol or fog formation: full mask, filter A.
Have a breathing apparatus that is not dependent on the circulating air ready for emergencies.

Hand protection:

Protective gloves according to EN 374.
Glove material: Nitrile rubber
Layer thickness: 0.4 mm.
Breakthrough time: 30 min.
Glove material: Butyl caoutchouc (butyl rubber)
Layer thickness: > 0.7 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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Eye protection:	Tightly sealed goggles according to EN 166. Protection goggles; in case of increased danger, use a face protection shield.
Body protection:	Wear suitable protective clothing.
General protection and hygiene measures:	Avoid contact with skin and eyes. Avoid the formation of aerosol. Take off immediately all contaminated clothing. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and after work.

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: yellow
Odour:	weak
Odour threshold:	No data available
pH:	at 20 °C, 100 g/L: 8 (DIN 19268)
Melting point/freezing point:	-32 °C (DIN 51583)
Initial boiling point and boiling range:	approx. 165 °C (ASTM D 1120)
Flash point/flash point range:	119 °C (c.c., ASTM D6450)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 3.00 Vol-% (ethylene glycol)
Vapour pressure:	at 20 °C: <= 0.1 hPa
Vapour density:	No data available
Density:	at 20 °C: 1.1138 g/mL (DIN 51757)
Water solubility:	at 20 °C: multimiscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	> 300 °C (DSC/nitrogen)
Viscosity, dynamic:	at 20 °C: 20.3 mPa*s
Viscosity, kinematic:	at 20 °C: 20.3 mm ² /s (DIN 51562)
Explosive properties:	Product is not explosive.
Oxidizing characteristics:	No data available

9.2 Other information

Ignition temperature:	> 400 °C (DIN 51794)
Additional information:	Surface tension: 33.8 mN/m

SECTION 10: Stability and reactivity

10.1 Reactivity

refer to 10.3

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10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents, alkalis.

10.4 Conditions to avoid

Keep away from sources of ignition and heat. Heating causes rise in pressure with risk of bursting.

10.5 Incompatible materials

Oxidizing agents, alkalis

10.6 Hazardous decomposition products

Thermal decomposition: Formaldehyde, hydrogen, methane, nitrogen oxides (NO_x), Carbon monoxide and carbon dioxide.
> 300 °C (DSC/nitrogen)

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): Acute Tox. 4; H302 = Harmful if swallowed.

ATEmix calculated: 519.54 mg/kg

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

Serious eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

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

Possible: damage of kidneys

Aspiration hazard: Lack of data.

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Other information: Information about ethylene glycol:
LD50 Mouse, dermal: > 3,500 mg/kg
LC50 Rat, inhalative: > 2.5 mg/L/6h
Irritant effect on the skin: Not an irritant (Rabbit, 20h)
Irritant effect on the eye: Not an irritant (Rabbit, 24h)
Skin sensitisation: not sensitising (Guinea pig, OECD 406)
Repeated dose toxicity: NOAEL Rat, oral: 150 mg/kg (OECD 408)
Mutagenicity: Negative in the Ames test. (OECD 471)
Reproduction toxicity: During animal experiments no indications of reproductive toxicity were observed.

Symptoms

Depression of central nervous system, Nausea, vomiting, Dizziness, inebriation, pulmonary oedema, Risk of kidney damage because of precipitation of calcium oxalate.
Symptoms may occur with delay. Bluish skin colour

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about ethylene glycol:
Algae toxicity:
EC50 Chlamydomonas angulosa: 3,536 mg/L/96h
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): > 100 mg/L/48h (OECD 202)
NOEC Ceriodaphnia spec: 8,590 mg/L/7d
Fish toxicity:
LC50 Pimephales promelas (fathead minnow): > 72,860 mg/L/96 h
NOEC: 2,629 mg/L/30d

12.2 Persistence and degradability

Further details: Information about ethylene glycol: Biodegradation: 90 - 100 %/10 d (OECD 301 A)
Effects in sewage plants: Bacterial toxicity:
EC20 activated sludge: > 1,995 mg/L/30 min

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

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

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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. Handle contaminated packages in the same way as the substance itself. 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

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

15.2 Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out: ethylene glycol

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SECTION 16: Other information

Further information

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

H302 = Harmful if swallowed.

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
ATEmix: Acute Toxicity Estimate of mixture
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
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

Reason of change: General revision

Date of first version: 25/9/2017

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.