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

1.1 Product identifier

Trade name: Therm 160

This safety data sheet pertains to the following products:
LZB 106: 5 L
LZB 206: 10 L
LZB 306: 20 L

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

General use: Heat transfer fluids
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: 97922 Lauda-Königshofen
Germany
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)

This mixture is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Precautionary statements: not applicable

Special labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

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

Chemical characterisation: Polyalkylenglykole and additives

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119491299-23-xxxx EC No. 270-128-1 CAS 68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene Aquatic Chronic 3; H412.	1 - 2.5 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation: Provide fresh air. Seek medical treatment in case of troubles.

Following skin contact: Remove residues with water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

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 thoroughly with water. Never give anything by mouth to an unconscious person.
Do not induce vomiting. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Nausea, Mucous membrane irritation.
Has degreasing effect on the skin.

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: Water spray jet, alcohol resistant foam, extinguishing powder.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Product is combustible.
In case of fire may be liberated: aldehydes, ketone, alcohols, carbon monoxide and carbon dioxide.
Danger of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Wear suitable protective clothing.

Additional information: Hazchem-Code: -

Do not allow water used to extinguish fire to enter drains, ground or waterways.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of aerosols/vapours. Provide adequate ventilation. Avoid breathing mist/vapours/spray.
Avoid contact with skin and eyes.
Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
In case of release, notify competent authorities.

6.3 Methods and material for containment and cleaning up

cover drains
Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Wash with plenty of water.

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 formation of aerosols/vapours. Provide adequate ventilation. Avoid breathing mist/vapours/spray.
Avoid contact with skin and eyes.
Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

Precautions against fire and explosion:

Keep away from sources of ignition and heat.
When handling larger quantities, take precautionary measures against electrostatic charging.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage: Do not store together with: 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

Additional information: Contains no substances with occupational exposure limit values.

DNEL/DMEL: Information about Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:
DNEL workers, systemic, short-term, inhalative: 0.6 mg/m³
DNEL workers, systemic, short-term, dermal: 0.08 mg/kg bw/d
DNEL consumers, Systemic, short-term, inhalative: 0.14 mg/m³
DNEL consumers, Systemic, short-term, dermal: 0.04 mg/kg bw/d
DNEL consumers, Systemic, short-term, oral: 0.04 mg/kg bw/d

PNEC: Information about Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:
PNEC water (freshwater): 0.034 mg/L.
PNEC water (marine water): 0.003 mg/L.
PNEC water (continuous): 0.51 mg/L.
PNEC sewage treatment plant: 10 mg/L.
PNEC sediment (freshwater): 0.446 mg/kg.
PNEC sediment (marine water): 0.045 mg/kg.
PNEC soil: 2.59 mg/kg

8.2 Exposure controls

When aerosols and vapours form: Withdraw by suction.

Personal protection equipment

Occupational exposure controls

Respiratory protection: In case of inadequate ventilation wear respiratory protection.
Respiratory protection in case of aerosol or vapour formation.
Recommendation: Use filter type A2-P2 according to EN 14387.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection: Protective gloves according to BS EN 374.
Glove material: PVC
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Protect skin by using skin protective cream.

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

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Avoid formation of aerosols/vapours. Avoid breathing mist/vapours/spray. Avoid contact with skin and eyes.
Take off contaminated clothing and wash it before reuse. When using do not eat or drink.
Wash hands before breaks and after work.

Environmental exposure controls

Do not allow to enter into ground-water, surface water or drains.

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: Bright green
Odour:	Characteristic
Odour threshold:	No data available
pH:	Not determined
Melting point/freezing point:	-36 °C
Initial boiling point and boiling range:	Not determined
Flash point/flash point range:	> 260 °C
Evaporation rate:	Not determined
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): Not determined UEL (Upper Explosive Limit): Not determined
Vapour pressure:	at 240 °C: <= 0.1 bar
Vapour density:	No data available
Density:	at 20 °C: 1.034 g/mL
Water solubility:	at 20 °C: soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	Not determined
Decomposition temperature:	No data available
Viscosity, kinematic:	at 20 °C: 140 mm^2/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 10.3

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.
Protect from moisture contamination.

10.5 Incompatible materials

Oxidizing agents, chemicals

10.6 Hazardous decomposition products

No decomposition when used properly.

Thermal decomposition: No data available

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.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

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

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

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

Other information: Information about Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:
LD50, Rat, oral: > 5000 mg/kg (OECD 401)

Symptoms

Mucous membrane irritation
In case of ingestion: Nausea

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Fish toxicity, LC50: >100 mg/L/96 h
Daphnia toxicity, EC50: > 100 mg/L/24 h
Daphnia toxicity, EC50: 51 mg/L/48 h
Algae toxicity, ErC50: >100 mg/L/72 h

12.2 Persistence and degradability

Further details: No data available

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

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

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 13 03 08* = Synthetic insulating and heat transmission oils
* = Evidence for disposal must be provided.

Recommendation: Special waste. 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

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: none.

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:

H412 = Harmful to aquatic life with long lasting effects.
EUH210 = Safety data sheet available on request.

Abbreviations and acronyms:

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
Aquatic Chronic: Hazardous to the aquatic environment - chronic
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
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
PVC: Polyvinyl chloride
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative

Reason of change: Changes in section 1: Product identifier
Date of first version: 29/10/2012

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.