

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

· **Trade name:** THERMAL HL30  
ANTIFROGEN N50

**Article number:**

Order No. (5L): 8940139

Order No. (10L): 8940138

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

· **Sector of Use SU3 Industrial uses:** Uses of substances as such or in preparations at industrial sites

· **Application of the substance / the mixture**  
temperature control liquid  
working temperature range: -30°C - +90°C

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Julabo GmbH

Eisenbahnstrasse 45

D-77960 Seelbach/Deutschland

**Further information obtainable from:**

sales & technical support

+49(0)782351-180

· **1.4 Emergency telephone number:** +49(0)89-19240 (24h)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R22: Harmful if swallowed.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**2.2 Label elements****Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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**Code letter and hazard designation of product:**


Xn Harmful

**Risk phrases:**

22 Harmful if swallowed.

**Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of soap and water.

37 Wear suitable gloves.










39 Wear eye/face protection.

**2.3 Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**
**3.2 Chemical characterization: Mixtures**
**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 107-21-1 EINECS: 203-473-3	ethanediol  Xn R22  STOT RE 2, H373;  Acute Tox. 4, H302	50.0%
CAS: 7632-00-0 EINECS: 231-555-9	sodium nitrite  T R25;  O R8;  N R50  Ox. Sol. 3, H272;  Acute Tox. 3, H301;  Aquatic Acute 1, H400	0.2%

**Additional information:** For the wording of the listed risk phrases refer to section 16.

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**
**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

**SECTION 5: Firefighting measures**
**5.1 Extinguishing media**
**Suitable extinguishing agents:**
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

**5.3 Advice for firefighters**
**Protective equipment:** Wear self-contained respiratory protective device.

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### SECTION 6: Accidental release measures

#### · 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

Ensure adequate ventilation

#### · 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up:

Dispose of the material collected according to regulations.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

#### · 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

#### · 7.1 Precautions for safe handling

Use only in well ventilated areas.

Open and handle receptacle with care.

#### · Information about fire - and explosion protection: No special measures required.

#### · 7.2 Conditions for safe storage, including any incompatibilities

##### · Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

##### · Information about storage in one common storage facility: Not required.

##### · Further information about storage conditions: None.

##### · Storage class: VCI: 12

#### · 7.3 Specific end use(s) No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · Additional information about design of technical facilities: No further data; see item 7.

#### · 8.1 Control parameters

##### · Ingredients with limit values that require monitoring at the workplace:

##### 107-21-1 ethanediol

WEL	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm
	Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm
	Sk *particulate **vapour

#### · Additional information: The lists valid during the making were used as basis.

#### · 8.2 Exposure controls

##### · Personal protective equipment:

##### · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

##### · Respiratory protection: Not required.

##### · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Butyl rubber, BR

· **Eye protection:** Goggles recommended during refilling

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Fluid

**Colour:** Light yellow

· **Odour:** Characteristic

· **pH-value at 20 °C:** ca.8 (DIN 19268)

· **Change in condition**

**Melting point/Melting range:** -32 °C (DIN 51583)

**Boiling point/Boiling range:** 108 °C

**Setting temperature / range:** ca. -37 °C

**Solidification point:** -70 °C

· **Flash point:** nicht brennbar

· **Ignition temperature:** nicht brennbar

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at 20 °C:** < 0.1 kPa (Syracuse)

· **Density at 20 °C:** 1.08 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Fully miscible.

· **Viscosity:**

**Kinematic at 20 °C:** 4.07 mm<sup>2</sup>/s

· **Solvent content:**

**VOC (EC)** 0.00 %

· **9.2 Other information** No further relevant information available.

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Slow thermal decomposition occurs at temperatures in excess of 250 °C / 482 °C
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

#### 107-21-1 ethanediol

Oral	LD50	5840 mg/kg (Ratte)
Dermal	LD50	9530 mg/kg (Kaninchen)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** LC0 Ide(*Leuciscus idus*): 1000 mg/L
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**  
07 01 99: wastes not otherwise specified

07 01 99	wastes not otherwise specified
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN-Number</b>	--
· <b>14.2 UN proper shipping name</b>	--
· <b>ADR</b>	Void
· <b>14.3 Transport hazard class(es)</b>	--
· <b>ADR, IMDG, IATA</b>	
· <b>Class</b>	--
· <b>14.4 Packing group</b>	--
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	--

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

Creation date: 19.09.2014

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
 H272 May intensify fire; oxidiser.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.
- .....
- R22 Harmful if swallowed.  
 R25 Toxic if swallowed.  
 R50 Very toxic to aquatic organisms.  
 R8 Contact with combustible material may cause fire.

- **Department issuing MSDS:**  
 LOGAR Günther Hasel e.K.  
 Baden-Airpark, Airport Boulevard B 210  
 D-77836 Rheinmünster  
 Tel: +49(0)7229-1868-163  
 Fax: +49(0)7229-1868-165
- **Contact:** info@logar.de

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**· Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Ox. Sol. 3: Oxidising Solids, Hazard Category 3*

*Acute Tox. 3: Acute toxicity, Hazard Category 3*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2*

*Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1*

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