

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** THERMAL G
Antifrogen N Wassergemisch 50%
- **Article number:**
Bestell-Nr. (5L): 8940125
Bestell-Nr. (10 L): 8940124
- **Application of the substance / the preparation** functional liquid brine
- **Manufacturer/Supplier:**
Julabo Labortechnik GmbH
Eisenbahnstrasse 45
D-77960 Seelbach/Deutschland
- **Further information obtainable from:**
sales & technical support
+49(0)782351-180
- **Information in case of emergency:** +49(0)89-19240 (24h)

2 Hazards identification

- **Hazard description:**



Xn Harmful

- **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.
R 22 Harmful if swallowed.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1	ethanediol	Xn; R 22	50,0%
CAS: 7632-00-0 EINECS: 231-555-9 Index number: 007-010-00-4	sodium nitrite	T, O, N; R 8-25-50	0,2%

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

4 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.

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

5 Fire-fighting measures

- **Suitable extinguishing agents:**
 CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
 In case of fire, the following can be released:
 Carbon monoxide (CO)
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:**
 Wear protective clothing.
 Ensure adequate ventilation
- **Measures for environmental protection:**
 Dilute with plenty of water.
 Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
 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.

7 Handling and storage

- **Handling:**
- **Information 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.
- **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

8 Exposure controls/personal protection

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

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

107-21-1 ethanediol

IOELV	Short-term value: 104 mg/m ³ , 40 ppm
	Long-term value: 52 mg/m ³ , 20 ppm
	Skin

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.

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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.

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

9 Physical and chemical properties

· General Information

Form:	Fluid
Colour:	Light yellow
Odour:	Characteristic

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 107°C

Setting temperature / range: ca. -37°C

· **Flash point:** Not applicable.

· **Ignition temperature:** keine °C

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

· **Vapour pressure at 20°C:** 0,1 mbar

· **Density at 20°C:** 1,084 g/cm³

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

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· pH-value at 20°C:	7,8
· Viscosity:	
Dynamic at 20°C:	4,2 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** Reacts with oxidizing agents.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **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

12 Ecological information

· **Ecotoxicological effects:**

· **Acquatic toxicity:** LC50 (Goldorfe): 1500 mg/l

· **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.

13 Disposal considerations

· **Product:**

· **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
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· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.**14 Transport information**· **Land transport ADR/RID (cross-border)**
· **ADR/RID class:** --· **Maritime transport IMDG:**
· **IMDG Class:** --
· **Marine pollutant:** No· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** --· **Transport/Additional information:** Not dangerous according to the above specifications.**15 Regulatory information**· **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.· **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.**16 Other information**

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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 R-phrases**
22 Harmful if swallowed.
25 Toxic if swallowed.
50 Very toxic to aquatic organisms.
8 Contact with combustible material may cause fire.· **Department issuing MSDS:**

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