

# Thermal G

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

### 1.1. Product identifier

**Trade name**

Thermal G

**Article No.**

5L: 8940125 10L: 8940124

**UFI code**

7P80-90HP-P003-N2EN

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

**Product type**

Tempering fluid

Working temperature range: -30°C....+80°C

**Relevant identified uses**

SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites.

### 1.3. Details of the supplier of the safety data sheet

**Supplier**

JULABO GmbH

Address

Gerhard-Juchheim-Straße 1

77960 Seelbach

Germany

Telephone

+49(0)782351-180

Email

service.de@julabo.com

Web site

www.julabo.com

### 1.4. Emergency telephone number

+49(0)89-19240 (24h)

**Available outside office hours**

No

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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

**Classification**

Acute toxicity, oral, hazard category 4

Specific Target Organ Toxicity — Repeated exposure, hazard category 2

**Hazard statements**

H302, H373

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

**Hazard pictograms**



**Signal word**

Warning

**Hazard statements**

H302 Harmful if swallowed.

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

**Precautionary statements**

P260 Do not breathe Nebel oder Dampf.

P264 Wash Haut thoroughly after handling.

P280.3 Wear eye protection.

P280.4 Wear face protection.

P314 Get medical advice/attention if you feel unwell.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container to einer anerkannten Abfallentsorgungsanlage zuführen..

### 2.3. Other hazards

This substance/mixture does not contain components classified as either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Toxicological information: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 at levels of 0.1% or more.

Commission Delegated Regulation (EU) 2018/605 at levels of 0.1% or more have endocrine disrupting properties.

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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
ethanediol; ethylene glycol	107-21-1 203-473-3 01-2119456816-28- xxxx 603-027-00-1	≥40 - <60%	Acute Tox. 4 - oral	H302 - -	-

#### Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Take off contaminated clothing.

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

#### Skin contact

Rinse the skin immediately with lots of water.

#### Eye contact

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

#### Ingestion

Get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

None known.

### 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

The product is non-combustible. Adapt extinguishing measures to the surroundings.

### 5.2. Special hazards arising from the substance or mixture

In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear necessary protective equipment.

### 6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses.

### 6.3. Methods and material for containment and cleaning up

Contain spillages with sand, earth or any suitable adsorbent material.

### 6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION SECTION 13:  
DISPOSAL CONSIDERATIONS

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

Ensure adequate ventilation. Only to be handled by authorized personnel. Keep away from food, drink and animal feeding stuffs.

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

Store in a well-ventilated place. Keep container tightly closed. D07.261188640

### 7.3. Specific end use(s)

No information available.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
Ethandiol (107-21-1/203-473-3)	DNEL	Chronic (long term) Inhalation	35 mg/m <sup>3</sup>	Workers	Systemic
Ethandiol (107-21-1/203-473-3)	DNEL	Chronic (long term) Dermal	106 mg/kg	Workers	Systemic
Ethandiol (107-21-1/203-473-3)	DNEL	Chronic (long term) Inhalation	7 mg/m <sup>3</sup>	Consumers	Systemic
Ethandiol (107-21-1/203-473-3)	DNEL	Chronic (long term) Dermal	53 mg/kg	Workers	Systemic

#### PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Ethandiol (107-21-1/203-473-3)	PNEC	Freshwater	10 mg/l
Ethandiol (107-21-1/203-473-3)	PNEC	Intermittent releases	10 mg/l
Ethandiol (107-21-1/203-473-3)	PNEC	Marine water	1 mg/l
Ethandiol (107-21-1/203-473-3)	PNEC	Sediment (freshwater)	37 mg/kg dwt
Ethandiol (107-21-1/203-473-3)	PNEC	Soil	1.53 mg/kg dwt
Ethandiol (107-21-1/203-473-3)	PNEC	Sewage Treatment Plant	199.5 mg/l
Ethandiol (107-21-1/203-473-3)	PNEC	Sediment (marine water)	3.7 mg/kg dwt

### 8.2. Exposure controls

#### Personal Protective Equipment Symbols



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**Eye / face protection**

Wear splash-proof eye goggles to prevent any possibility of eye contact.

**Hand protection**

Long Term : Butyl rubber gloves - breakthrough time: 480min, glove thickness: 0.7mm Short Term Nitrile rubber gloves - breakthrough time: 30min, glove thickness: 0.4mm

**Other skin protection**

Use protective clothing, which covers arms and legs. Wear suitable protective clothing as protection against splashing or contamination.

**Respiratory protection**

Use only outdoors or in a well-ventilated area. In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapour cartridge.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical state**

Liquid

**Colour**

Yellowish.

**Odour**

Slight odour.

**Odour threshold**

Not determined.

**Melting point / freezing point**

-44 °C

**Method**

DIN 51583

**Boiling point or initial boiling point and boiling range**

109 °C

**Method**

ASTM D 1120

**Flammability**

No data available

**Lower and upper explosion limit**

No data recorded.

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**Flash point**

> 410 °C

**Method**

ASTM D6450

**Auto-ignition temperature**

No data available

**Decomposition temperature**

> 250 °C

**Method**

DSC

**pH**

~ 8

**Method**

DIN 19268

**Kinematic viscosity**

3.87 mm<sup>2</sup>/s

**Method**

DIN 51562

**Viscosity, dynamic**

4.13 mPa · s

**Solubility**

Miscible with water.

**Partition coefficient n-octanol/water**

No data available

**Vapour pressure**

No data available

**Density and/or relative density**

No data available

**Relative vapour density**

No data available

**Particle characteristics**

No data available

**9.2. Other information**

No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

see section 10.3. "Possibility of hazardous reactions".

### 10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

### 10.3. Possibility of hazardous reactions

Avoid contact with acids and oxidising substances.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

No decomposition when used as intended.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline	Remarks
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Dust/Mist	>2,5 mg/l	Acute Toxicity (Inhalation LC50):	6 hours	Rat	Other	The substance or mixture has no acute respiratory toxicity.
ethanediol; ethylene glycol 107-21-1 / 203-473-3	-	> 3.500 mg/kg	Acute Toxicity (Dermal LD50):	-	Mouse	Other	The substance or mixture has no acute dermal toxicity.

#### Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species	Method / Guideline
ethanediol; ethylene glycol	No skin irritation	20 h	Rabbit	Other



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Product / Substance name CAS / EC no.	Result	Duration of exposure	Species	Method / Guideline
107-21-1 / 203-473-3				

### Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species	Method / Guideline
ethanediol; ethylene glycol 107-21-1 / 203-473-3	No eye irritation	24 h	Rabbit	Other

### Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
ethanediol; ethylene glycol 107-21-1 / 203-473-3	No skin sensitizer Harmful if swallowed.	Guinea Pig	OECD Test Guideline 406 Maximisation test

### Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Based on available data, the classification criteria are not met.

### Carcinogenicity

Product / Substance name CAS / EC no.	Exposure route	Value / Dose	Species
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Oral	6520-12500-25000-50000 ppm	Mouse

### Reproductive toxicity

Product / Substance name CAS / EC no.	Exposure route	Value / Dose	Species	Result
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Oral	1.000 mg/kg	Rat	No reproductive toxicity expected. No teratogenic effects expected.

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## STOT-single exposure

Product / Substance name CAS / EC no.	Exposure route	Target organs	Value / Dose	Species	Result	Exposure time / Exposure frequency	Method / Guideline
ethanediol; ethylene glycol 107-21-1 / 203-473-3	There are no data available.	There are no data available.	There are no data available.	There are no data available.	The substance or mixture is not classified as a single exposure target organ toxicant.	There are no data available.	There are no data available.

## STOT-repeated exposure

Product / Substance name CAS / EC no.	Exposure route	Target organs	Value / Dose	Species	Result	Exposure time / Exposure frequency	Method / Guideline	Other
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Oral	Kidneys.	There are no data available.	There are no data available.	May cause damage to organs through prolonged or repeated exposure.	There are no data available.	There are no data available.	There are no data available.

## Aspiration hazard

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

## 11.2. Information on other hazards

### Endocrine disrupting properties

Toxicological information: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 at levels of 0.1% or more.

Commission Delegated Regulation (EU) 2018/605 at levels of 0.1% or more have endocrine disrupting properties.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

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Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline	Remark
ethanediol; ethylene glycol 107-21-1 / 203-473-3	static test	>72.860 mg/l	96 hours	LC50	Fisch	Other Products.	Is not to be classified as hazardous to waters
ethanediol; ethylene glycol 107-21-1 / 203-473-3	static test	>100 mg/l	48 hours	EC50	Daphnia magna	Other Products.	Is not to be classified as hazardous to waters
ethanediol; ethylene glycol 107-21-1 / 203-473-3	static test	>13.000 mg/l	96 hours	EC50	Alga	Other Products.	Is not to be classified as hazardous to waters

### Chronical toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
ethanediol; ethylene glycol 107-21-1 / 203-473-3	Other Products.	>1.500 mg/l	28 days	LC50	Fish	Other Products.
ethanediol; ethylene glycol 107-21-1 / 203-473-3	semistatic test	>15.000 mg/l	21 days	EC50	aquatic invertebrates	Other Products.

## 12.2. Persistence and degradability

### Persistence and degradability

Product / Substance name CAS / EC no.	Result
ethanediol; ethylene glycol 107-21-1 / 203-473-3	The substance is easily biodegradable.

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

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Product / Substance name CAS / EC no.	LogKow / LogPow	Remark
ethanediol; ethylene glycol 107-21-1 / 203-473-3	- / -1,36	Bioaccumulation is not expected due to the low log POW.

## 12.4. Mobility in soil

### Mobility

Product / Substance name CAS / EC no.	KOC
ethanediol; ethylene glycol 107-21-1 / 203-473-3	0 (ECHA)

## 12.5. Results of PBT and vPvB assessment

### Results of PBT and vPvB assessment

Product / Substance name CAS / EC no.	PBT / vPvB
ethanediol; ethylene glycol 107-21-1 / 203-473-3	This product does not contain any PBT or vPvB substances.

## 12.6. Endocrine disrupting properties

Environmental information: The substance/mixture does not contain any components that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more have endocrine disrupting properties.

## 12.7. Other adverse effects

### Other adverse effects

When used properly, no disturbance in sewage treatment plants

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Dispose of waste and residues in accordance with local authority requirements.

#### Packaging

Completely emptied packaging can be recycled. Contaminated packaging shall be treated in the same way as the substance.

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## SECTION 14: Transport information

### 14.1. UN number

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.3. Transport hazard class(es)

#### Label

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

#### ADR / RID Class

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.4. Packing group

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.5. Environmental hazards

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.6. Special precautions for user

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/AND/RID).

### 14.7. Maritime transport in bulk according to IMO instruments

No carriage in bulk according to IBC Code

## SECTION 15: Regulatory information

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

#### EU regulations

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) The restriction conditions for following entries should be taken into account: List 3 number

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS): Not listed.

Ordinance on Persistent Organic Pollutants (POPs): Not listed.

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**National regulations**

D15.261203910 D15.261183950

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

**SECTION 16: Other information****Changes to previous revision**

Revision of all sections and change of layout

**Abbreviations**

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

ATE - Acute Toxicity Estimate

C&amp;L - Classification and Labelling

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CMR - Carcinogen, Mutagen, or Reproductive Toxicant

CSR - Chemical Safety Report

DMEL - Derived Minimum Effect Level

DNEL - Derived No Effect Level

EC50 - Half Maximal Effective Concentration

ECHA - European Chemicals Agency

GHS - Globally Harmonized System

IATA - International Air Transport Association

IMDG - International Maritime Dangerous Goods

Kow - octanol-water partition coefficient

LC50 - Lethal Concentration to 50 % of a test population

LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)

LoW - List of Wastes

OEL - Occupational Exposure Limit

PBT - Persistent, Bioaccumulative and Toxic substance

PEC - Predicted Environmental Concentration

PNEC - Predicted No Effect Concentration(s)

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

SCBA - Self-Contained Breathing Apparatus

STOT - Specific Target Organ Toxicity

SVHC - Substances of Very High Concern

UFI - Unique Formula Identifier

vPvB - Very Persistent and Very Bioaccumulative

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**Phrase meaning**

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4

STOT RE 2 - Specific Target Organ Toxicity — Repeated exposure, hazard category 2

H302 Harmful if swallowed.

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