

# Thermal HL60

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

### 1.1. Product identifier

**Trade name**

Thermal HL60

**Article No.**

5L: 8940141 10L: 8940140

**REACH registration number**

the substance is exempt from the obligation to register

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

**Relevant identified uses**

Tempering fluid

Working temperature range: -60°C...+250°C

### 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

**Contact person**

Verkauf und technische Beratung

**Email**

service.de@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

#### Description

This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.

### 2.2. Label elements

#### More information

not required

### 2.3. Other hazards

Contains a PBT/vPvB substance in a concentration of > 0.1%. Contains no endocrine disruptor (EDC) in a concentration of >0.1%

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
Polydimethylsiloxane	63148-62-9 613-156-5 - -	>95 - <99%	-	- - -	-
Dodecamethylcyclohexasiloxane	540-97-6 208-762-8 01-2119517435-42- xxxx -	>0.5 - <1%	-	- - -	SVHC

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Remove soiled, soaked clothing immediately. If symptoms occur or in case of doubt, seek medical advice. Do not leave affected persons unattended. If unconscious, keep the patient in the recovery position and do not administer anything by mouth.

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## Inhalation

Provide rest, warmth and fresh air. Provide fresh air. In case of accident or if you feel unwell, seek medical advice immediately (show this label or the safety data sheet if possible).

## Skin contact

Remove soiled, soaked clothing immediately. IF ON SKIN: Wash with plenty of soap and water. Consult a doctor in case of skin reactions.

## Eye contact

Immediately rinse carefully and thoroughly with eye wash or water. If eye irritation persists: Get medical advice/attention.

## Ingestion

Rinse mouth with water. Do NOT induce vomiting.

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

No symptoms and effects are known to date.

### 4.3. Indication of any immediate medical attention and special treatment needed

None.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>). Alcohol resistant foam. Spray water Water spray. BC powder Sand

#### Unsuitable extinguishing media

Water full jet

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

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Formaldehyde.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Toxic gases may be produced in the event of fire. Do not inhale explosion and fire gases. Self-contained breathing apparatus. Do not allow extinguishing water to enter sewers and bodies of water. Fight fire with normal precautions from a reasonable distance. Collect contaminated extinguishing water separately and do not allow it to enter the sewage system.

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## SECTION 6: Accidental release measures

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

Bring people to safety. In case of spills, beware of slippery floors and surfaces. A respirator must be worn when exposed to vapors, dusts, aerosols and gases. Use personal protective equipment.

### 6.2. Environmental precautions

Prevent the product from entering the sewage system or surface and ground water. Prevent the area from spreading (e.g. by containing the oil booms). Retain and dispose of contaminated wash water / extinguishing water.

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

Pick up mechanically, cover the sewers Absorb spillage with suitable absorbent material. Absorb spillage: Sawdust, kieselguhr (diatomite), sand, universal binder Use of adsorbent materials. In case of spills, beware of slippery floors and surfaces. Dispose of in suitable containers. Ventilate the affected area.

### 6.4. Reference to other sections

Hazardous combustion products: see section 5 Personal protective equipment - see section 8 Incompatible materials: see section 10

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

Use only in well ventilated areas Do not breathe gas, fume, vapours or spray. Vapors/aerosols must be safely extracted directly at the point of origin.

#### General hygiene

Avoid contact with eyes and skin. Wash hands after contact. Keep away from food, drink and animal feeding stuffs. Do not use containers for chemicals that are normally intended for holding food.

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

Store in a cool and well-ventilated place. Keep only in original packaging. Keep away from sources of ignition - No smoking. Take action to prevent static discharges. D07.261188620

### 7.3. Specific end use(s)

There is no information available.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits

Does not contain substances in quantities above the concentration limits for which an occupational exposure limit is specified. Technical measures and the use of appropriate work procedures take precedence over the use of personal protective equipment. Personal protective equipment shall be used if the risks cannot be avoided or sufficiently limited by collective technical means of protection or by work organisation measures, methods or procedures.

#### DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Chronic (long term) Inhalation	11 mg/m <sup>3</sup>	Workers	Systemic
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Chronic (long term) Inhalation	1.22 mg/m <sup>3</sup>	Workers	Local
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Acute (short term) Inhalation	6.1 mg/m <sup>3</sup>	Workers	Local
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Chronic (long term) Inhalation	2.7 mg/m <sup>3</sup>	Consumers	Systemic
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Chronic (long term) Inhalation	0.3 mg/m <sup>3</sup>	Consumers	Local
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Acute (short term) Inhalation	1.5 mg/m <sup>3</sup>	Consumers	Local
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Chronic (long term) Oral	1.7 mg/kg bw/day	Workers	Systemic
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	DNEL	Acute (short term) Oral	1.7 mg/kg bw/day	Consumers	Systemic

#### PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	PNEC	Sewage Treatment Plant	1 mg/l
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	PNEC	Sediment (freshwater)	13 mg/kg dwt
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	PNEC	Sediment (marine water)	1.3 mg/kg dwt

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Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Dodecamethylcyclohexasiloxane (540-97-6/208-762-8)	PNEC	Soil	3.77 mg/kg dwt

## 8.2. Exposure controls

### Appropriate engineering controls

Open windows and doors to provide sufficient ventilation. If this is not possible, increase air exchange by using ventilation.

### Eye / face protection

Use safety goggles with side protection.

### Hand protection

Wear suitable protective gloves. A chemical protective glove tested in accordance with EN 374 is suitable. Check for leaks/impermeability before use. If you intend to reuse the gloves, clean them before taking them off and air them thoroughly afterwards. It is recommended to clarify the chemical resistance of the mentioned protective gloves for special applications with the glove manufacturer. Butyl rubber. Isobutene-isoprene rubber NBR: Acrylonitrile butadiene rubber Include recovery phases to regenerate the skin. Preventive skin protection (protective creams/ointments) is recommended. Wash hands thoroughly after handling.

### Respiratory protection

Normally no personal respiratory protection necessary Respiratory protection is required for: Aerosol or mist formation, full/half/quarter mask (EN 136/140), type: A-P2 (combination filter for particles and organic gases and vapors, identification color: brown/white)

### Environmental exposure controls

Use suitable containers to avoid contamination of the environment. Prevent the product from entering the sewage system or surface and ground water.

## SECTION 9: Physical and chemical properties

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

#### Physical state

Liquid

#### Colour

Colourless.

#### Odour

Faintly perceptible

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**Melting point / freezing point**

-100 °C

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

288 °C

**Flammability**

No data available

**Lower and upper explosion limit**

Not determined.

**Flash point**

> 120 °C

**Auto-ignition temperature**

350 °C

**Decomposition temperature**

Not relevant.

**pH**

Not applicable.

**Kinematic viscosity**

5.66 mm<sup>2</sup>/s

**Method**

(20°C)

**Solubility**

insoluble

**Water solubility**

insoluble

**Partition coefficient n-octanol/water**

Not determined.

**Vapour pressure**

Not determined.

**Density and/or relative density**

~ 0.92 g/cm<sup>3</sup>

**Method**

(20°C)

**Relative vapour density**

There is no information available.

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## Particle characteristics

No data available

## 9.2. Other information

Hazard classes according to GHS (physical hazards): not relevant

Temperature class T2 (maximum permissible surface temperature of the equipment: 300°C)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Regarding incompatibilities: see below "Conditions to avoid" and "Incompatible materials".

### 10.2. Chemical stability

The material is stable under normal ambient conditions and under the temperature and pressure conditions to be expected during storage and handling.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known.

### 10.4. Conditions to avoid

There are no known conditions to be specifically avoided.

### 10.5. Incompatible materials

Oxidizing agent

### 10.6. Hazardous decomposition products

Measurements have shown that at temperatures above approx. 150°C a small amount of formaldehyde is split off by oxidative degradation.

## SECTION 11: Toxicological information

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

This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.

#### Skin corrosion/irritation

The criteria for categorisation in this hazard class are not met.

Acute toxicity estimate

ATE (Oral) : >5.000 mg/kg

ATPE (Dermal) : >2.000 mg/kg

#### Serious eye damage/irritation

The criteria for categorisation in this hazard class are not met.



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## Respiratory or skin sensitisation

The criteria for categorisation in this hazard class are not met.

## Germ cell mutagenicity

The criteria for categorisation in this hazard class are not met.

## Carcinogenicity

The criteria for categorisation in this hazard class are not met.

## Repeated dose toxicity

The criteria for categorisation in this hazard class are not met.

## Reproductive toxicity

The criteria for categorisation in this hazard class are not met.

## STOT-single exposure

The criteria for categorisation in this hazard class are not met.

## STOT-repeated exposure

The criteria for categorisation in this hazard class are not met.

## Aspiration hazard

The criteria for categorisation in this hazard class are not met.

## 11.2. Information on other hazards

### Endocrine disrupting properties

No additional information is available.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

Product / Substance name CAS / EC no.	Remark
Polydimethylsiloxane 63148-62-9 / 613-156-5	According to 1272/2008/EC: Not to be classified as hazardous to the aquatic environment.
Dodecamethylcyclohexasiloxane 540-97-6 / 208-762-8	Based on available data, up to the maximum solubility of the product, no classification-relevant effects on aquatic organisms are expected. on aquatic organisms are to be expected. According to current experience, no adverse effects in sewage treatment plants are expected. The material is not harmful to aquatic organisms (LC50/EC50/IC50/LL50/EL50 > 100 mg/L for the most sensitive species).

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Product / Substance name CAS / EC no.	Remark
	species). Conclusion by analogy.

## 12.2. Persistence and degradability

### Persistence and degradability

Product / Substance name CAS / EC no.	Remark
Polydimethylsiloxane 63148-62-9 / 613-156-5	There are no data available.
Dodecamethylcyclohexasiloxane 540-97-6 / 208-762-8	There are no data available.

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

Product / Substance name CAS / EC no.	Remark
Polydimethylsiloxane 63148-62-9 / 613-156-5	There are no data available.

## 12.4. Mobility in soil

### Mobility

Product / Substance name CAS / EC no.	Remark
Polydimethylsiloxane 63148-62-9 / 613-156-5	There are no data available.
Dodecamethylcyclohexasiloxane 540-97-6 / 208-762-8	There are no data available.

## 12.5. Results of PBT and vPvB assessment

### Results of PBT and vPvB assessment

Product / Substance name CAS / EC no.	PBT / vPvB
Dodecamethylcyclohexasiloxane 540-97-6 / 208-762-8	Dodecamethylcyclohexasiloxane (D6) fulfils the current criteria of Annex XIII of the EU REACH Regulation for

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Product / Substance name CAS / EC no.	PBT / vPvB
	vPvB and has been placed on the candidate list of substances of very high concern (SVHCs). However, D6 does not behave not comparable to the known PBT/vPvB substances. According to the interpretation of the available data by the silicone industry, the scientific evidence from field tests does not essentially indicate that D6 is that D6 is not biomagnifying in aquatic and terrestrial food chains. D6 in the air decomposes through naturally occurring processes in the atmosphere. It is not expected that D6 that does not decomposing D6 residues in the air are not expected to be deposited in water, soil or living organisms.

## 12.6. Endocrine disrupting properties

Contains no endocrine disruptor (EDC) in a concentration of >0.1%

## 12.7. Other adverse effects

### Other adverse effects

There are no data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Disposal in accordance with Directive 2008/98/EC on waste and hazardous waste. Contact the responsible authorized waste disposal company for waste disposal.

The assignment of the waste code number/waste designation is to be carried out in accordance with the EWC on a sector- and process-specific basis.

Should be prevented from entering drains. Avoid releasing to the environment.

Obtain special instructions/consult safety data sheet.

#### Packaging

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

### Other

Please observe the relevant national or regional regulations. Waste must be separated in such a way that it can be kept separately by the municipal or national waste disposal facilities.

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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

Not relevant.

### 14.3. Transport hazard class(es)

Label

Not applicable.

### 14.4. Packing group

not assigned

### 14.5. Environmental hazards

Environmental hazards

Not hazardous to the environment according to dangerous goods regulations

### 14.6. Special precautions for user

Special precautions for user

No additional information is available.

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

The freight is not transported in bulk.

## SECTION 15: Regulatory information

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

#### EU regulations

Regulation (EC) No. 1907/2006 (REACH), 1272/2008 (CLP) as amended.

This product contains substances of very high concern (REACH Regulation (EC) No 1907/2006, Article 57) - see Table 3.2

PBT/vPvB: A57d/vPvB A57e

SEVESO-category: nicht zugeordnet

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.

#### National regulations

D15.261203910

D15.261183950

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## 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&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