

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

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

- **1.1 Product identifier**
- **Trade name: MANNOL 9908 Defroster 450ml**
- **UFI: 1NEV-80A1-T00S-H63E**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Cleaning agent/ Cleaner
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SCT-Vertriebs GmbH  
Feldstrasse 154  
22880 WEDEL  
DEUTSCHLAND  
+49 (0)4103 1211 0  
info@sct-germany.de
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**  
Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
diethyl ether  
ethanediol

(Contd. on page 2)



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### according to 1907/2006/EC, Article 31

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Version number 2305 (replaces version 1)

Revision: 03.10.2022

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 1)

**Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H302 Harmful if swallowed.

H336 May cause drowsiness or dizziness.

**Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

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

### SECTION 3: Composition/information on ingredients

**3.2 Mixtures**• **Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 60-29-7 EINECS: 200-467-2	diethyl ether Flam. Liq. 1, H224; Acute Tox. 4, H302; STOT SE 3, H336, EUH019, EUH066	50-<65%
CAS: 106-97-8 EINECS: 203-448-7	butane, pure Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-<18%
CAS: 107-21-1 EINECS: 203-473-3	ethanediol Acute Tox. 4, H302	5-<15%
CAS: 74-98-6 EINECS: 200-827-9	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-<8%

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

(Contd. on page 3)



## Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 2305 (replaces version 1)

Revision: 03.10.2022

**Trade name: MANNOL 9908 Defroster 450ml**

(Contd. of page 2)

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **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>. Do not use water.

Use fire extinguishing methods suitable to surrounding conditions.

Foam

Fire-extinguishing powder

Sand

· **For safety reasons unsuitable extinguishing agents:** Water

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

During heating or in case of fire poisonous gases are produced.

#### · 5.3 Advice for firefighters

· **Protective equipment:** Mouth respiratory protective device.

##### · **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

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

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Particular danger of slipping on leaked/spilled product.

Wear protective clothing.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

#### · 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.

(Contd. on page 4)



## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 3)

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

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

<b>60-29-7 diethyl ether (65.0%)</b>	
OEL	Short-term value: 616 mg/m <sup>3</sup> , 200 ppm Long-term value: 308 mg/m <sup>3</sup> , 100 ppm IOELV
<b>106-97-8 butane, pure (18.0%)</b>	
OEL	Short-term value: 1000 ppm
<b>107-21-1 ethanediol (15.0%)</b>	
OEL	Short-term value: 40 mg/m <sup>3</sup> , 104 ppm Long-term value: 52 mg/m <sup>3</sup> , 20 ppm Sk, IOELV
<b>74-98-6 propane (8.0%)</b>	
OEL	Asphx

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as 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.  
Store protective clothing separately.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

**Trade name: MANNOL 9908 Defroster 450ml**

(Contd. of page 4)

- **Hand protection**



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.

- **Eye/face protection** Safety glasses

## SECTION 9: Physical and chemical properties

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

- **General Information**

· <b>Colour:</b>	Clear
· <b>Odour:</b>	Like alcohol
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	Not applicable, as aerosol.
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	1.7 Vol %
· <b>Upper:</b>	53 Vol %
· <b>Flash point:</b>	Not applicable, as aerosol.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.816 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

(Contd. on page 6)



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 5)

· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Liquid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	May form explosive peroxides.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	61-<91 %
· <b>VOC (EC)</b>	61-<91 %
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not applicable.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Extremely flammable aerosol. Pressurised container: May burst if heated.
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Carbon monoxide  
Aldehyde  
Poisonous gases/vapours

(Contd. on page 7)

IE



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

**Trade name: MANNOL 9908 Defroster 450ml**

Carbon dioxide

(Contd. of page 6)

### SECTION 11: Toxicological information

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

- **Acute toxicity**  
Harmful if swallowed.

**LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Oral	LD50	>1,869–2,430 mg/kg (rat)
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**60-29-7 diethyl ether**

Oral	LD50	1,215 mg/kg (rat)
Inhalative	LC50/4 h	73,000 mg/l (rat)

**106-97-8 butane, pure**

Inhalative	LC50/4 h	658 mg/l (rat)
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**107-21-1 ethanediol**

Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	9,530 mg/kg (rabbit)

- **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.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** 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.
- **STOT-single exposure**  
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

**Endocrine disrupting properties**

None of the ingredients is listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
For information on endocrine disrupting properties see section 11.

(Contd. on page 8)

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Version number 2305 (replaces version 1)

Revision: 03.10.2022

**Trade name: MANNOL 9908 Defroster 450ml**

(Contd. of page 7)

· **12.7 Other adverse effects**

· **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.

### 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**

HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity

· **Uncleaned packaging:**

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

### SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA** UN1950

· **14.2 UN proper shipping name**

· **ADR** 1950 AEROSOLS  
 · **IMDG** AEROSOLS  
 · **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 2 5F Gases.  
 · **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1 Gases.  
 · **Label** 2.1

(Contd. on page 9)





## Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 2305 (replaces version 1)

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Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 8)

· 14.4 Packing group · ADR, IMDG, IATA	not regulated
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): - · EMS Number: · Stowage Code  · Segregation Code	Warning: Gases.  F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)  · Transport category · Tunnel restriction code	1L Code: E0 Not permitted as Excepted Quantity 2 D
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P3a FLAMMABLE AEROSOLS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

(Contd. on page 10)

IE



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.05.2023

Version number 2305 (replaces version 1)

Revision: 03.10.2022

**Trade name: MANNOL 9908 Defroster 450ml**

(Contd. of page 9)

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

60-29-7 diethyl ether

3

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

60-29-7 diethyl ether

3

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

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

H220 Extremely flammable gas.  
H224 Extremely flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H302 Harmful if swallowed.  
H336 May cause drowsiness or dizziness.  
EUH019 May form explosive peroxides.  
EUH066 Repeated exposure may cause skin dryness or cracking.

· **Department issuing SDS:** Product safety department.

· **Version number of previous version:** 1

### · Abbreviations and acronyms:

ADR: Accord relatif au transport international 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 Harmonised 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  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Gas 1A: Flammable gases – Category 1A  
Aerosol 1: Aerosols – Category 1  
Press. Gas (Comp.): Gases under pressure – Compressed gas  
Flam. Liq. 1: Flammable liquids – Category 1  
Acute Tox. 4: Acute toxicity – Category 4  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3