

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

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

- **1.1 Product identifier**
- **Trade name: MANNOL 9908 Defroster 450ml**
- **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
info@sct-germany.de
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:** Giftinformationszentrum-Nord +49-551-19240

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.



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.

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



GHS08

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

(Contd. on page 2)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 1)

ethanediol

- **Hazard statements**

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

H302 Harmful if swallowed.

H336 May cause drowsiness or dizziness.

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

- **Precautionary statements**

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

P102 Keep out of reach of children.

P103 Read label before use.

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

P251 Do not pierce or burn, even after use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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:**

EUH019 May form explosive peroxides.

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	diethyl ether	50-<65%
EINECS: 200-467-2	Flam. Liq. 1, H224; Acute Tox. 4, H302; STOT SE 3, H336	
CAS: 106-97-8	butane	10-<18%
EINECS: 203-448-7	Flam. Gas 1, H220; Press. Gas C, H280	
CAS: 107-21-1	ethanediol	5-<15%
EINECS: 203-473-3	STOT RE 2, H373; Acute Tox. 4, H302	
CAS: 74-98-6	propane	1-<8%
EINECS: 200-827-9	Flam. Gas 1, H220; Press. Gas C, H280	

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

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.

(Contd. on page 3)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 2)

- **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:**
CO2. 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 item 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.

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.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 3)

- **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

- **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:**

60-29-7 diethyl ether (65.0%)

WEL	Short-term value: 620 mg/m ³ , 200 ppm Long-term value: 310 mg/m ³ , 100 ppm
-----	-------------------------------------------------------------------------------------------------------

106-97-8 butane (18.0%)

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
-----	-------------------------------------------------------------------------------------------------------------------------------------------------------

107-21-1 ethanediol (15.0%)

WEL	Short-term value: 104** mg/m ³ , 40** ppm Long-term value: 10* 52** mg/m ³ , 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.
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.
- **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

(Contd. on page 5)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 4)

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 protection: Safety glasses**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:** Liquid**Colour:** Clear**· Odour:** Like alcohol**· Odour threshold:** Not determined.**· pH-value:** Not determined.**· Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** Not applicable, as aerosol.**· Flash point:** Not applicable, as aerosol.**· Flammability (solid, gas):** Not applicable.**· Decomposition temperature:** Not determined.**· Auto-ignition temperature:** Product is not selfigniting.**· Explosive properties:** May form explosive peroxides.**· Explosion limits:****Lower:** 1.7 Vol %**Upper:** 53 Vol %**· Vapour pressure:** Not determined.**· Density at 20 °C:** 0.816 g/cm³**· Relative density** Not determined.**· Vapour density** Not determined.**· Evaporation rate** Not applicable.**· Solubility in / Miscibility with****water:** Not miscible or difficult to mix.**· Partition coefficient: n-octanol/water:** Not determined.**· Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**· Solvent content:****Organic solvents:** 61-<91 %**VOC (EC)** 61-<91 %

(Contd. on page 6)

GB



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 5)

9.2 Other information

No further relevant information available.

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
Carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

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

Oral	LD50	>1,869–2,430 mg/kg (rat)
------	------	--------------------------

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

Inhalative	LC50/4 h	658 mg/l (rat)
------------	----------	----------------

107-21-1 ethanediol

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

- **Primary irritant effect:**
- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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**
May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 6)

- **Aspiration hazard** Based on available data, the classification criteria are not met.

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.
- **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**

HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity
HP 15	Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste.

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR** 1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable

(Contd. on page 8)

-GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 7)

· **14.3 Transport hazard class(es)**

· **ADR**



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

· **IMDG, IATA**



· **Class** 2.1
 · **Label** 2.1

· **14.4 Packing group**

· **ADR, IMDG, IATA** not regulated

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Warning: Gases.

· **Danger code (Kemler):**

-

· **EMS Number:**

F-D,S-U

· **Stowage Code**

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.

· **Segregation Code**

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 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **Transport category**

2

· **Tunnel restriction code**

D

· **IMDG**

· **Limited quantities (LQ)**

1L

(Contd. on page 9)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2019

Revision: 08.02.2019

Trade name: MANNOL 9908 Defroster 450ml

(Contd. of page 8)

· Excepted quantities (EQ)	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
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 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.
- H373 May cause damage to organs through prolonged or repeated exposure.

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

· **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 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 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas C: 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
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

- *** Data compared to the previous version altered.**