

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

1. SECTION	IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
------------	--

1.1 Product identifier: MANNOL Antifreeze AG13+ (-40 °C) Advanced

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

Relevant identified uses: engine coolant

1.3 Details of the supplier of the safety data sheet: UAB "SCT Lubricants"

Adress: Šilutės pl. 119, 5800 Klaipėda, Lithuania

Telephone: +370 46 340345

E-mail: klaipeda@sct.lt

Fax: (37046) 341891

1.4 Emergency telephone number: Adress: Šiltnamiu 29, LT-2043 Vilnius, telephone 8-5236 20 52 or +370 687 53378 (day and night)

2. SECTION	HAZARD IDENTIFICATION
------------	-----------------------

2.1 Classification of the substance or mixture:

According to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 (oral)

STOT RE (Kidney) 2

For the classifications not written out in full in this section the full text can be found in section 16

2.2 Label elements:

Globally Harmonized System, EU (GHS)

Pictogram:



Signal Word:
Warning

Hazard Statement:

H302 Harmful if swallowed.

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

Precautionary Statements (Prevention):

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

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

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P311 Call a POISON CENTER or doctor/physician.

P301 + P330 IF SWALLOWED: rinse mouth.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced

Prepared according to Commission Regulation (EC) No. 453/2010



According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: ETHANE-1,2-DIOL/ETHYLENEGLYCOL

2.3 Other hazards:

According to Regulation (EC) No 1272/2008 [CLP]

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. SECTION COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not applicable

3.2 Mixtures:

Chemical nature

ethanediol; ethylene glycol

inhibitors

This product contains (a) substance(s) included on the candidate list according to article 59 (1,10) of regulation EC No. 1907/2006 ('REACH') in a concentration equal or above 0.1% w/w: disodium tetraborate pentahydrate; borax pentahydrate

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

EB Nr.	CAS Nr.	Reg. number	Name	Content %	Classification according to Regulation (EC) 1272/2008 (CLP)
203-473-3	107-21-1	01-2119488911-28	Ethylene glycol	<60 %	Acute Tox. 4 (oral) H302
203-872-2	111-46-6	-	Diethylene glycol	0-8 %	Acute Tox. 4 (oral) H302
601-808-1	12179-04-3	01-2119492616-28	Boric acid, disodium salt, pentahydrate substance listed as REACH Candidate	0,5-2 %	Repr. 1B, H360FD

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the H phrases, and the hazard statements, the full text is listed in section 16.

4. SECTION FIRST AID MEASURES

4.1. Description of first aid measures

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced

Prepared according to Commission Regulation (EC) No. 453/2010



Remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention. Administer 50 ml of pure ethanol in a drinkable concentration.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. SECTION FIRE-FIGHTING MEASURES

5.1. Extinguishing media :

Suitable extinguishing media:
water spray, dry powder, foam

5.2. Special hazards arising from the substance or mixture:

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters :

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. SECTION ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective clothing. Breathing protection required.

6.2. Environmental precautions:

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up:

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections:

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. SECTION HANDLING AND STORAGE

7.1. Precautions for safe handling:

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities :

The product in undamaged packing need not be stored separately.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

7.3. Specific end use(s) :

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. SECTION EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Components with occupational exposure limits

107-21-1: ethanediol; ethylene glycol

TWA value 52 mg/m³ ; 20 ppm (OEL (EU))

indicative

STEL value 104 mg/m³ ; 40 ppm (OEL (EU))

indicative

Skin Designation (OEL (EU))

The substance can be absorbed through the skin.

8.2. Exposure controls:

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

SAFETY DATA SHEET



MANNOL Antifreeze AG13+ (-40 °C) Advanced

Prepared according to Commission Regulation (EC) No. 453/2010

Hand protection:

Chemical resistant protective gloves (EN 374)

Suitable materials short-term contact and/or splashes (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374)

butyl rubber (butyl) - 0.7 mm coating thickness

nitrile rubber (NBR) - 0.4 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.

9. SECTION PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Form: liquid

Colour: according to specification

Odour: product specific

Odour threshold:

No applicable information available.

pH value: approx. 8 (ASTM D1287)

(diluted with water 1:1 by volume)

Melting point: < -40 °C (DIN ISO 3016)

Boiling point: > 105 °C (ASTM D1120)

(1,013 hPa)

Flash point: > 124 °C (DIN EN 22719; ISO 2719)

Evaporation rate:

Value can be approximated from

Henry's Law Constant or vapor pressure.

Flammability: not flammable

Lower explosion limit: 3.4 %(V) (DIN 51649-1, air)
(20 °C)

Upper explosion limit: 15.1 %(V) (DIN 51649-1, air)
(20 °C)

Ignition temperature: 420 °C (DIN 51794)

Vapour pressure: 0.2 hPa

(20 °C)

Density: 1.065 - 1.125 g/cm³ (DIN 51757)

(20 °C)

Solubility in water: readily soluble

Solubility (qualitative) solvent(s): polar solvents
soluble

Partitioning coefficient n-octanol/water (log Kow):

Study scientifically not justified.

Self ignition: not self-igniting

Thermal decomposition: No decomposition if correctly stored and handled.

Viscosity, kinematic: < 30 mm²/s (DIN 51562)

(20 °C)

Explosion hazard: not explosive

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

Fire promoting properties: not fire-propagating

9.2. Other information:

Self heating ability: It is not a substance capable of spontaneous heating.

Hygroscopy: hygroscopic

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. SECTION STABILITY AND REACTIVITY

10.1. Reactivity:

No hazardous reactions if stored and handled as prescribed/indicated.
Corrosion to metals: No corrosive effect on metal.

10.2. Chemical stability:

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions:

No hazardous reactions when stored and handled according to instructions.

10.4. Conditions to avoid:

Avoid open flames.

10.5. Incompatible materials:

Substances to avoid:
strong oxidizing agents

10.6. Hazardous decomposition products :

Hazardous decomposition products:
No hazardous decomposition products known.

11. SECTION TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Of low toxicity after short-term skin contact.

Experimental/calculated data:
LD (human) (oral): approx. 1,600 mg/kg

Irritation

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies. Human data do not fully exclude a skin sensitizing potential.

Carcinogenicity

Assessment of carcinogenicity:

The whole of the information assessable provides no indication of a carcinogenic effect.

Developmental toxicity

Information on: ethanediol; ethylene glycol

Assessment of teratogenicity:

In animal studies the substance caused malformations when given at high doses.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Information on: ethanediol; ethylene glycol

Assessment of repeated dose toxicity:

The substance may cause damage to the kidney after repeated ingestion. The substance may cause damage to the kidney after repeated skin contact with high doses.

Other relevant toxicity information

The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

12. SECTION ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Leuciscus idus*

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna*

Aquatic plants:

EC50 (72 h) > 100 mg/l, algae

Microorganisms/Effect on activated sludge:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

12.2. Persistence and degradability:

Elimination information:

> 70 % DOC reduction (28 d) (OECD 301 A (new version)) Readily biodegradable.

12.3. Bioaccumulative potential:

Bioaccumulation potential:

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

Accumulation in organisms is not to be expected.

12.4. Mobility in soil:

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

12.5. Results of PBT and vPvB assessment:

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects:

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information:

Other ecotoxicological advice:

The product has not been tested. The statement has been derived from the properties of the individual components.

Do not release untreated into natural waters.

13. SKIRSNIS | DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments.

Waste key:

16 01 14⁰¹ antifreeze fluids containing dangerous substances

Contaminated packaging:

Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. SECTION | TRANSPORT INFORMATION (RID/ADR)

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN number: Not applicable

UN proper shipping name: Not applicable

Transport hazard class(es): Not applicable

Packing group: Not applicable

Environmental hazards: Not applicable

Special precautions for: None known

SAFETY DATA SHEET



MANNOL Antifreeze AG13+ (-40 °C) Advanced

Prepared according to Commission Regulation (EC) No. 453/2010

user

RID

Not classified as a dangerous good under transport regulations

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known
Transport in inland waterway vessel:	Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

14.1. UN number

See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for “UN proper shipping name” for the respective regulations in the tables

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010
above.

14.3. Transport hazard class(es)

See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. SKIRSNIS REGULATORY INFORMATION

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

15.2. Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines

16. SECTION OTHER INFORMATION

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox. 4 (oral)
STOT RE (Kidney) 2

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

Acute Tox.4 (Oral)- Acute toxicity Category 4
STOT RE Specific target organ toxicity — repeated exposure
Repr. 1B- Reproductive toxicity Category 1B
H302 Harmful if swallowed.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.

SAFETY DATA SHEET

MANNOL Antifreeze AG13+ (-40 °C) Advanced



Prepared according to Commission Regulation (EC) No. 453/2010

H360 FD-May damage fertility. May damage the unborn child.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.