

# SAFETY DATA SHEET



MANNOL Antifreeze AF12+ (- 40 °C) Longlife

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

1. SECTION	IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
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**1.1 Product identifier:** MANNOL Antifreeze AF12+ (- 40 °C) Longlife

**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
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**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):

P301+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.

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

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

ethanediol; ethylene glycol  
Content (W/W): < 60 %      Acute Tox. 4 (oral)  
CAS Number: 107-21-1      STOT RE (Kidney) 2  
EC-Number: 203-473-3      H302, H373  
REACH registration number: 01-2119456816-28  
INDEX-Number: 603-027-00-1

Hazardous ingredients  
according to Directive

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

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:

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

### 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/m<sup>3</sup> ; 20 ppm (OEL (EU))  
indicative

STEL value 104 mg/m<sup>3</sup> ; 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)

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.

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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)

(measured with the undiluted substance)

Melting point: &lt; -40 °C (DIN ISO 3016)

Boiling point: &gt; 105 °C (ASTM D1120)

(1,013 hPa)

Flash point: &gt; 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 - 1.170 g/cm<sup>3</sup> (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 mm<sup>2</sup>/s (DIN 51562) (20 °C)

Explosion hazard: not explosive

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

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.

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**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) &gt; 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:

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

**12.3. Bioaccumulative potential:**

Bioaccumulation potential:

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

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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 14<sup>03</sup> 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 user: None known

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 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. Acute toxicity  
STOT RE Specific target organ toxicity — repeated exposure  
H302 Harmful if swallowed.  
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.

Any abbreviations and acronyms used in this document:

AC Article Categories  
acc., acc. to according, according to  
ACGIH American Conference of Governmental Industrial Hygienists  
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
AOEL Acceptable Operator Exposure Level AOX Adsorbable organic halogen compounds approx. approximately  
Art., Art. no. Article number  
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

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BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany) BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany) BCF Bioconcentration factor  
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation) BHT Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)  
BMGV Biological monitoring guidance value (EH40, UK) BOD Biochemical oxygen demand  
BSEF Bromine Science and Environmental Forum bw body weight  
CAS Chemical Abstracts Service  
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
CIPAC Collaborative International Pesticides Analytical Council  
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
CMR carcinogenic, mutagenic, reproductive toxic COD Chemical oxygen demand  
CTFA Cosmetic, Toiletry, and Fragrance Association DMEL Derived Minimum Effect Level  
DNEL Derived No Effect Level DOC Dissolved organic carbon  
DT50 Dwell Time - 50% reduction of start concentration  
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes) dw dry weight  
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community  
ECHA European Chemicals Agency EEA European Economic Area  
EEC European Economic Community  
EINECS European Inventory of Existing Commercial Chemical Substances ELINCS European List of Notified Chemical Substances  
EN European Norms  
EPA United States Environmental Protection Agency (United States of America) ERC Environmental Release Categories  
ES Exposure scenario etc. et cetera  
EU European Union  
EWC European Waste Catalogue Fax. Fax number  
gen. general  
GHS Globally Harmonized System of Classification and Labelling of Chemicals GWP Global warming potential  
HET-CAM Hen's Egg Test - Chorionallantoic Membrane HGWP Halocarbon Global Warming Potential  
IARC International Agency for Research on Cancer IATA International Air Transport Association  
IBC Intermediate Bulk Container  
IBC (Code) International Bulk Chemical (Code) IC Inhibitory concentration  
IMDG-code International Maritime Code for Dangerous Goods incl. including, inclusive  
IUCLID International Uniform Chemical Information Database LC lethal concentration  
LC50 lethal concentration 50 percent kill LCLo lowest published lethal concentration LD Lethal Dose of a chemical  
LD50 Lethal Dose, 50% kill LDLo Lethal Dose Low  
LOAEL Lowest Observed Adverse Effect Level LOEC Lowest Observed Effect Concentration LOEL Lowest Observed Effect Level  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable n.av. not available  
n.c. not checked  
n.d.a. no data available  
NIOSH National Institute of Occupational Safety and Health (United States of America) NOAEC No Observed Adverse Effective Concentration

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NOAEL No Observed Adverse Effect Level NOEC No Observed Effect Concentration NOEL No Observed Effect Level

ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development org. organic

PAH polycyclic aromatic hydrocarbon PBT persistent, bioaccumulative and toxic PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration POCP Photochemical ozone creation potential ppm parts per million

PROC Process category PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern Tel. Telephone

ThOD Theoretical oxygen demand TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances) UN RTDG

United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization wwt wet weight

Information Sources: The Classification and Labeling of Petroleum Substances to the EU Dangerous Substance Directive. Information from raw material suppliers.

Disclaimer: This information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as quaranteeing any specific property of product. Receiver of our product is responsible for those applicable laws and regulations are being followed.