

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 20-May-2019

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Version: 2.1

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Mabanol Engine Coolant Extra

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

1.1. Product identifier

Trade name/designation:

Mabanol Engine Coolant Extra

Additional information:

UFI: XFSJ-43UM-C005-C38C

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

Use of the substance/mixture:

Kühlerfrostschutz / Antifreeze

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Mabanol GmbH & Co. KG

Koreastraße 7

20457 Hamburg

Germany

Telephone: 0049 (0) 40 36809988

E-mail: info@mabanol.com

Website: www.mabanol.com

1.4. Emergency telephone number

Giftinformationszentrale Göttingen , 24h: 0049 (0) 551 1 92 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (oral) (<i>Acute Tox. 4</i>)	H302: Harmful if swallowed.	
STOT-repeated exposure (<i>STOT RE 2</i>)	H373: May cause damage to organs through prolonged or repeated exposure. (...)	

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark



GHS08

Health hazard

Signal word: Warning

Hazard components for labelling:

Disodium tetraborate, anhydrous; ethane-1,2-diol

hazard statements for health hazards

H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure. (kidneys)

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

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Precautionary statements Prevention

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

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

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

Precautionary statements Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/....

Precautionary statements Disposal

P501 Dispose of contents/container to Dispose of this material and its container to hazardous or special waste collection point..

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Additional information:

Glycol. Inhibitor.

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 107-21-1 EC No.: 203-473-3 REACH No.: 01-2119456816-28	ethane-1,2-diol Acute Tox. 4, STOT RE 2 H302-H373	80 - < 98 Wt %
CAS No.: 532-32-1 EC No.: 208-534-8 REACH No.: 01-2119460683-35	Sodium benzoate Eye Irrit. 2 H319	1 - < 5 Wt %
CAS No.: 12179-04-3 EC No.: 215-540-4 REACH No.: 01-2119490790-32	Disodium tetraborate, anhydrous <i>Candidate List of Substances of Very High Concern for Authorisation!</i> Eye Irrit. 2, Repr. 1B H319-H360FD	0.1 - < 3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

When in doubt or if symptoms are observed, get medical advice. Remove contaminated, saturated clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air. Get medical advice/attention if you feel unwell.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, consult a physician.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion:

Rinse mouth. Let water be drunk in little sips (dilution effect). Observe risk of aspiration if vomiting occurs. Get medical advice/attention if you feel unwell.

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

Following inhalation: May cause respiratory irritation. Symptoms: Cough. Dizziness. Drowsiness. Nausea. Ingestion causes nausea, weakness and central nervous system effects.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

alcohol resistant foam. Extinguishing powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media:

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

In case of fire: Gases/vapours, toxic.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Treat the recovered material as prescribed in the section on waste disposal.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment. Use appropriate respiratory protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Take up mechanically, placing in appropriate containers for disposal. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8). Provide adequate ventilation.

Fire prevent measures:

Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

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Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin. Wash hands before breaks and after work. Remove contaminated, saturated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets. Do not breathe gas/fumes/vapour/spray.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in the original container in a cool, well-ventilated place.

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE)	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m ³) ② 20 ppm (52 mg/m ³) ⑤ (kann über die Haut aufgenommen werden)
IOELV (EU)	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m ³) ② 40 ppm (104 mg/m ³) ⑤ (may be absorbed through the skin)
TRGS 900 (DE)	Sodium benzoate CAS No.: 532-32-1	① 10 mg/m ³ ② 20 mg/m ³ ⑤ (einatembare Fraktion), (kann über die Haut aufgenommen werden)
DFG (DE)	Disodium tetraborate, anhydrous CAS No.: 12179-04-3	① 0.75 mg/m ³ ② 0.75 mg/m ³
TRGS 900 (DE)	Disodium tetraborate, anhydrous CAS No.: 12179-04-3	① 0.5 mg/m ³ ② 1 mg/m ³ ⑤ (einatembare Fraktion)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Sodium benzoate CAS No.: 532-32-1	3 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
Sodium benzoate CAS No.: 532-32-1	1.5 mg/m ³	① DNEL Consumer ② DNEL long-term inhalative (systemic)
Sodium benzoate CAS No.: 532-32-1	0.1 mg/m ³	① DNEL worker ② DNEL long-term inhalative (local)

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Substance name	DNEL value	① DNEL type ② Exposure route
Sodium benzoate CAS No.: 532-32-1	0.06 mg/m ³	① DNEL Consumer ② DNEL long-term inhalative (local)
Sodium benzoate CAS No.: 532-32-1	62.5 mg/kg	① DNEL worker ② DNEL long-term dermal (systemic)
Sodium benzoate CAS No.: 532-32-1	31.25 mg/kg	① DNEL Consumer ② DNEL long-term dermal (systemic)

Substance name	PNEC Value	① PNEC type
Sodium benzoate CAS No.: 532-32-1	10 mg/l	① PNEC sewage treatment plant (STP)
Sodium benzoate CAS No.: 532-32-1	0.013 mg/l	① PNEC aquatic, marine water
Sodium benzoate CAS No.: 532-32-1	0.176 mg/kg	① PNEC sediment, marine water
Sodium benzoate CAS No.: 532-32-1	1.76 mg/kg	① PNEC sediment, freshwater
Sodium benzoate CAS No.: 532-32-1	300 mg/kg	① PNEC Secondary Poisoning
Sodium benzoate CAS No.: 532-32-1	0.13 mg/l	① PNEC aquatic, freshwater

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection (DIN EN 166).

Skin protection:

Tested protective gloves must be worn (EN ISO 374).

Suitable material: Butyl caoutchouc (butyl rubber). Thickness of the glove material: 0,70 mm.

Suitable material: NBR (Nitrile rubber). Thickness of the glove material: 0,40 mm.

Breakthrough times and swelling properties of the material must be taken into consideration. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: high concentrations. prolonged exposure. Suitable respiratory protection apparatus: Combination filtering device (EN 14387).

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: greenish blue

Odour: not determined

Safety relevant basis data

parameter		at °C	Method	Remark
pH	7.2	20 °C	ASTM D 1287	
Melting point	<i>not determined</i>			
Freezing point	<i>not determined</i>			

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parameter		at °C	Method	Remark
Initial boiling point and boiling range	> 180 °C			
Decomposition temperature	<i>not determined</i>			
Flash point	122 °C		COC	
Evaporation rate	<i>not determined</i>			
Auto-ignition temperature	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	1.125 g/cm ³	20 °C		
Bulk density	<i>not determined</i>			
Water solubility	miscible			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>			

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Oxidising agent, strong.

10.6. Hazardous decomposition products

aldehydes. Ketone.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	LD₅₀ dermal: 9,530 mg/kg (Rabbit)

Acute oral toxicity:

Harmful if swallowed.

LD50: ~ 1.716 mg/kg (Practical/human experience./calculated.)

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

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.

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Respiratory or skin sensitisation:

May cause sensitisation especially in sensitive humans. 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:

Based on available data, the classification criteria are not met.

STOT-repeated exposure:

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

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional information:

Frequently or prolonged contact with skin may cause dermal irritation.

SECTION 12: Ecological information

12.1. Toxicity

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	LC ₅₀ : >18,500 mg/l 4 d LC ₅₀ : 10,500 - 12,700 mg/l 2 d LC ₅₀ : >100 mg/l 2 d
12179-04-3	Disodium tetraborate, anhydrous	LC ₅₀ : 104 mg/l 4 d (Gambusia affinis (Mosquito fish))

12.2. Persistence and degradability

Biodegradation:

Biodegradable.

12.3. Bioaccumulative potential

CAS No.	Substance name	Log K _{OW}	Bioconcentration factor (BCF)
107-21-1	ethane-1,2-diol	-1.36	

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
107-21-1	ethane-1,2-diol	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
12179-04-3	Disodium tetraborate, anhydrous	—
532-32-1	Sodium benzoate	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

16 01 14 *	antifreeze fluids containing hazardous substances
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*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

Land transport (ADR/ RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO- TI / IATA-DGR)
14.1. UN-No.			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant			
14.4. Packing group			
not relevant			
14.5. Environmental hazards			
not relevant			
14.6. Special precautions for user			
not relevant			

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Other regulations (EU):

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds: No information available.

This product is not classified according to Directive 2012/18/EU.

Observe in addition any national regulations!

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15.1.2. National regulations

 [DE] National regulations

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

Remark:

Self-classification (mixture; calculation rule).

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1. Indication of changes

1.1.	Product identifier
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16.2. Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: Accord européen sur le transport des marchandises dangereuses par Route (International Carriage of Dangerous Goods by Road)
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute of Occupational Safety and Health
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OEL: Occupational Exposure limit (Arbeitsplatzgrenzwert)
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limit (Zulässiger Expositionsgrenzwert)
PBT: persistent bioaccumulative toxic
PNEC: predicted no effect concentration
REL: Recommended exposure limit (Empfohlene Expositionsgrenze)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit (Kurzzeitgrenzwert) (15 min)
SVHC: substance of very high concern
TLV: Threshold Limit Values (Schwellwert Grenzwerte)
TRGS Technische Regeln für Gefahrstoffe
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average (Zeitlich gewichteter Mittelwert) (8 h)
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (oral) (<i>Acute Tox. 4</i>)	H302: Harmful if swallowed.	
STOT-repeated exposure (<i>STOT RE 2</i>)	H373: May cause damage to organs through prolonged or repeated exposure. (...)	

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16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure. (...)

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version