

Safety Data Sheet

according to Regulation (EC) No 1907/2006

HEPU P888

Print date: 06.11.2015

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

1.1. Product identifier

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

Use of the substance/mixture

Radiator anti-freeze

1.3. Details of the supplier of the safety data sheet

Company name: HEPU-Autoteile GmbH
Street: Am Kreuzweg 2
Place: D-32689 Kalletal
Telephone: +49 (0)5264 6483-44 Telefax: +49 (0)5264 6483-44
e-mail: info@hepu.de
Internet: www.hepu.de
Responsible Department: Kundenservice

1.4. Emergency telephone number: Giftnotruf NRW (DE; E) +49 (0)5264-19 240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: Xn -Harmful
R phrases:
Harmful if swallowed.

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

Hazard categories:
Acute toxicity: Acute Tox. 4
Specific target organ toxicity - repeated exposure: STOT RE2
Hazard Statements:
Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazardous components which must be listed on the label

ethanediol, ethylene glycol

Signal word: Warning
Pictograms: GHS07-GHS08



Hazard statements

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

Precautionary statements

P102 Keep out of reach of children.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

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P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P314 Get medical advice/attention if you feel unwell.

2.3. Other hazards

following inhalation: Vapour and mist concentrations above the allowable levels or unusually high concentrations may cause irritation to the nose and throat as well as headache, nausea and drowsiness.

After skin contact: Brief contact with the product may cause slight skin irritation. Prolonged contact (e.g. through soaked clothing) may result in serious skin irritation with symptoms such as redness and swelling.

Following eye contact: Conjunctival redness.

after ingestion: Oral ingestion of small amounts causes kidney damage.

Caution if victim vomits: Risk of aspiration!

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
203-473-3	ethanediol, ethylene glycol	25 - < 30 %
107-21-1	Xn - Harmful R22	
603-027-00-1	Acute Tox. 4, STOT RE 2; H302 H373	
01-2119456816-28		

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off contaminated clothing.
Self-protection of the first aider

After inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

After contact with skin

Wash with plenty of water. Change contaminated clothing. IF ON SKIN: Wash with plenty of water/?.
If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist. Call a physician immediately.
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Medical treatment necessary. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Rinse mouth immediately and drink plenty of water.
Do NOT induce vomiting.

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

Ethylene glycol poisoning may cause initial symptoms such as behavioral disorders, drowsiness, vomiting, diarrhea, thirst and spasms. Kidney damage and kidney failure along with metabolic acidosis are late poisoning symptoms. Prompt medical treatment complemented by haemodialysis, if necessary, can reduce the toxic effect. Intravenous administration of ethanol in a sodium bicarbonate solution is a recognized antidote. For further treatment information, please consult the Poison Control Centre.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Dry extinguishing powder. Water fog. Foam. Carbon dioxide.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn. Special exposure hazards arising from the substance itself, combustion products, resulting gases: Carbon monoxide. carbon black Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. Do not breathe gas/fumes/vapour/spray. Special danger of slipping by leaking/spilling product. Ventilate affected area.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

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. Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes. Wash hands thoroughly after handling. Protect skin by using skin protective cream.

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Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.
 Keep container in a well-ventilated place.

Advice on storage compatibility

Do not store together with: Oxidizing agents.

Do not store together with: Food and fodder

Further information on storage conditions

Keep away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
56-81-5	Glycerol, mist	-	10		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink. Do not eat, drink, smoke or sneeze at the workplace. Keep away from food, drink and animal feedingstuffs. Protect skin by using skin protective cream. Wash hands before breaks and after work. Apply skin care products after work. Remove contaminated, saturated clothing immediately. Do not put any product-impregnated cleaning rags into your trouser pockets.

Eye/face protection

Wear eye/face protection.

Hand protection

Avoid contact with skin.

Tested protective gloves are to be worn: Butyl rubber. / NBR (Nitrile rubber).

Skin protection

Body protection: not required.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

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SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	blue
Odour:	characteristic

Test method

pH-Value (at 20 °C): 7,5-9

Changes in the physical state

Melting point:	No data available.
Initial boiling point and boiling range:	not determined
Ignition temperature in °C::	>400 °C DIN 51794
Flash point:	>110 °C DIN 51758
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Vapour pressure: (at 20 °C)	<0,1 hPa
Density (at 20 °C):	1,045 g/cm ³ DIN 51757
Water solubility:	completely miscible
Viscosity / kinematic: (at 20 °C)	>22 mm ² /s DIN 51562

SECTION 10: Stability and reactivity**10.1. Reactivity**

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.2. Chemical stability

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.3. Possibility of hazardous reactions

possible with strong oxidizing agents.

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.4. Conditions to avoid

possible with strong oxidizing agents.

10.5. Incompatible materials

possible with strong oxidizing agents.

10.6. Hazardous decomposition products

none

Further information

none

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Acute toxicity, dermal.

ATEmix calculated

ATE (oral) 1848,4 mg/kg

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CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
107-21-1	ethanediol, ethylene glycol				
	oral	LD50	4000 mg/kg		
	dermal	LD50	10600 mg/kg	Rabbit	GESTIS

Irritation and corrosivity

Frequently or prolonged contact with skin may cause dermal irritation.

Sensitising effects

not determined

Severe effects after repeated or prolonged exposure

Frequently or prolonged contact with skin may cause dermal irritation.

Carcinogenic/mutagenic/toxic effects for reproduction

The product is not classified.

Specific effects in experiment on an animal

No data available

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC). Oral ingestion of small amounts causes kidney damage.

Contact with the eyes causes eye inflammation.

Inhalation of mists and vapours causes impaired consciousness.

Further information

No special hazards known when the product is properly used and the precautionary measures indicated are observed.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
107-21-1	ethanediol, ethylene glycol					
	Acute fish toxicity	LC50	18500 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50 mg/l	6500 - 7500	96 h	Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50 mg/l	> 10,000	48 h	Daphnia magna	

12.2. Persistence and degradability

According to EU criteria: expected to biodegrade fast The product basis (ethylene glycol) itself is readily biodegradable.

12.3. Bioaccumulative potential

Biological degradation: Yes, rapidly

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,34

12.4. Mobility in soil

No data available

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12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC). Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing dangerous substances
Classified as hazardous waste.

Waste disposal number of used product

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing dangerous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Contaminated packaging should be emptied to the maximum possible extent. After appropriate cleaning, it can be routed to reuse. Packaging not amenable to cleaning must be disposed of in accordance with the statutory regulations.

SECTION 14: Transport information**Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)**Other applicable information (marine transport)**

No dangerous good in sense of this transport regulation.

Air transport (ICAO)**Other applicable information (air transport)**

No dangerous good in sense of this transport regulation.

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MADE IN GERMANY

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14.6. Special precautions for user

No data available

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 2 - water contaminating

SECTION 16: Other information**Relevant R-phrases (Number and full text)**

22 Harmful if swallowed.

Relevant H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H373 May cause damage to kidneys through prolonged or repeated exposure by swallowing.

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

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)