

1. Identification of substance:

- **Trade name:** HEPU Coolant Additive P999-G12
- **Manufacturer / Supplier:** HEPU Autoteile GmbH
Am Kreuzweg 2
32689 Kalletal (Germany)
Tel.: +49- 5264-6483-40
Fax: +49- 5264-6483-44
- **Product details:** Antifreeze/coolant additive for cooling systems

2. Hazards identification:

- **Hazard designation:** Xn Harmful
- **Information pertaining to particular dangers for man and environment:**
This product is water polluting; see item 12.
R 22 Harmful if swallowed; R 63 Possible risk of harm to the unborn child
- **Classification system:**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
The classification results from the Conventional Method of 88/ 379 EEC concerning specific data of compounds.
- **Additional information:**
This product is applied only as solution or emulsion in water.

3. Composition/ Data on components:

- **Chemical characterization**
- **Description:** Mixture of glycol and inhibitors
- **Dangerous components:**

Glycole	>90%	Xn	R 22
Na-2-Ethylhexanoate	<8%	Xn	R 63
Methyl-1H-benzotriazole	<1%	Xn	R20/22, R 36

4. First aid measures

- **General information:**
Change clothes and shoes contaminated or soaked by the product. Never put rags contaminated by the product into cloth-pockets.
- **After inhalation:**
Supply fresh air; consult doctor in case of symptoms (eventually by inhaling the overheated product).
- **After skin contact:**
The product is not skin irritating.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
- **After swallowing:**
Rinse out mouth and then drink plenty of water. Call a doctor immediately.
- **Information for doctor**
Symptomatic treatment (decontamination, vital functions), possibly administration of ethanol.

5. Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol- resistant foam.
 - **For safety reasons unsuitable extinguishing agents:**
Water with a full water jet.
 - **Projective equipment:**
- In case of fire fighting: wear self containing breathing apparatus**
- **Additional information:**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6. Accidental release measures

- **Person- related safety precautions:**
Particular danger of slipping on leaked / spilled product.
- **Environmental protection measures:**
Do not allow to enter drainage system, surface or ground water.
- **Measures for cleaning / collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

7. Handling and storage

Handling

- **Information for safe handling:**
Store in cool, dry place in tightly closed containers. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products.
- **Information about protection against explosion and fires:**
No special measures required.

Storage

- **Requirements to be met by storerooms and containers:**
No special requirements.
- **Information about storage in one common storage facility:**
Not required.
- **Further information about storage conditions:**
Local regulations concerning handling and storage of waterpolluting products have to be followed.

Storage class

- **Class according to regulation on inflammable liquids:**
Void

8. Exposure controls and personal protection

- **Additional information about design of technical systems:**
No further data; see item 7.
- **Components with critical values that require monitoring at the workplace:**

Glycol	(approx. 91%)
OEL:	MAK 10mg/m ³ (see below)
	Particulate, vapour: 60mg/m ³ at 8 hrs, 125 mg/m ³ at 15 hrs
	MAK 10ppm; STEL 40ppm; OSHA PEL-TWA 20ppm
- **Additional information:**
The lists that were valid during the compilation were used as basis.
There is no reason to fear a risk of damage to the developing embryo or fetus when the MAK value is adhered to.
Skin resorption hazard: Wear suitable gloves.
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to in handling the chemicals and the mineral oil products.
Keep away from foodstuffs, beverages and food.
Wash hands during breaks and at the end of the work.
Avoid close or long term contact with the skin.
Use skin protection cream for preventive skin protection.
Do not carry cleaning cloths impregnated with the product in trouser pockets.
- **Breathing equipment:**
Avoid breathing vapour / aerosol.
- **Protection of hands:** PVC gloves
- **Eye protection:** Safety glasses
- **Body protection:**
Protective work clothing.

9. Physical and chemical properties

- **Form:** fluid
- **Colour:** red
- **Smell:** characteristic

	<u>Value/ Range</u>	<u>Unit</u>	<u>Method</u>
• Change in condition			
• Melting point / Melting range:	not determined		
• Boiling point / Boiling range:	> 160°C		
• Flash point:	> 100°C		ISO 2592
• Ignition temperature:	> 400°C		
• Decomposition temperature:	not determined		
• Self inflammability:	Product is not self igniting		
• Danger of explosion:	Product is not explosive		
• Vapour pressure:	at 20°C	2 mbar	
• Density:	at 20°C	~1,116g/cm ³	DIN 51 757
• Solubility in / Miscibility with water:	fully miscible		
• Viscosity or consistency-class			
• Kinematic:	at 20°C	<15mm ² /s	DIN 51 562

10. Stability and reactivity

- **Thermal decomposition/ conditions to be avoided:**
No decomposition if used according to specifications.
- **Materials to be avoided:**
Powerful oxidising agent.
- **Dangerous reactions:**
No dangerous reactions known.
- **Dangerous products of composition:**
No dangerous decomposition products known.

11. Toxicological information

- **Acute toxicity:**
- **LD/ LC50 values that are relevant for classification:**
Glycol
Oral: LD 50: 50-400 mh/kg
Dermal: LD 50: >2000 mh/kg
- **Primary irritant effect:**
- **On the skin**
No irritant effect known.
- **On the eye:**
No irritant effect known.
- **Sensitization:**
No sensitizing effect known.
- **Other information (about experimental toxicology):**
Experiences in humans:
Ethanediol:
Lethal dose if swallowed approx. 1,5 g/kg body weight.
Lethal dose approx. 90-110 g for adults and correspondingly less for children.
Smaller doses can result in: consciousness is affected kidney damage, damage to the central nervous system.
- **Additional toxiological information:**
Skin resorption hazard.
Some studies in mice and rats have shown a harmful effect on the foetus after oral ingestion of high doses. These effects did not occur in a study on rabbits.
The whole of the information available provides no indication of a carcinogenic effect.

12. Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:**
 - Test method: OECD 301A / ISO 7827
 - Method of analysis: DOC reduction
 - Degree of elimination: > 70% (5d)
 - Evaluation: readily biodegradable
- **Ecotoxicological effects:**
- **Behaviour in sewage processing plants:**
 - Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations
- **Additional ecological information:**
 - AOX: This product contains no organically bound hallogen.
- **General notes**
 - German water endangering class 1 (self-assessment): slightly hazardous for water
 - Do not allow to reach ground water, water bodies or sewage system.

13. Disposal considerations

- **Product:**
- **Recommendation:**
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
 - When storing used mineral oil products, ensure that the categories for waste oil only to officially authorized collectors.
- **European waste catalogue**
 - 14 00 00: wastes from organic substances employed as solvents (except 07 00 00 and 08 00 00).
 - 14 04 00: wastes from coolants, foam / aerosol propellents
 - 14 04 03: other solvents and solvent mixes
- **Uncleaned packagings:**
- **Recommendation:**
 - Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Small one- way packagings have to be disposed according to the local regulations. EWC 15 01 99
- **Recommended cleaning agent:**
 - Water, if necessary with cleaning agent.

14. Transport information:

- **Land transport ADR/ RID and GGVS/ GGVE (cross border/ domestic)**
- **ADR/ RID- GGVS/ E class: --**
- **Maritime Transport IMDG/ GGVSea: --**
- **IMDG/ GGVSea Class: --**
- **Air transport ICAO-TI and IATA- DGR: --**
- **ICAO/ IATA Class: --**
- **Transport/ Additional information:**
 - No dangerous good acc. to dangerous goods/ transport directions.

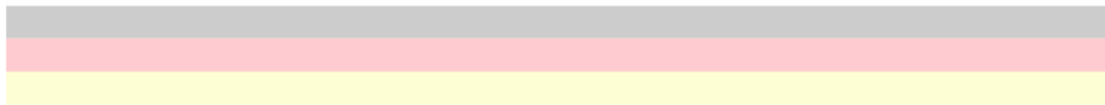
15. Regulatory information

- **Designation according to EU guidelines:**
 - The product has been classified and labelled in accordance with EC directives until 2000/32/EC (26. ATP).
- **Code letter and hazard designation of product:**
- Xn Harmful
- **Risk phrases:**
 - 22 Harmful if swallowed.
 - 63 Possible risk of harm to the unborn child.
- **Safety phrases:**
 - 24/25 Avoid contact with skin and eyes.
 - 46 If swallowed, seek medical advice immediately and show this container or label.
- **Classification according to VbF:**
 - Void
- **German Water Hazard Class:**
 - WPC / water polluting class 1 (self- assessment): slightly hazardous for water.

16. Other information:

All ingredients are listed in the European Inventories. These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. This data sheet is a safety data sheet according to 91/ 155/ EU.

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