

English Version

REC'D MAY 12 2012

Rec. 10-16-06

GERLING  
HOLZ+CO



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GHC Material safety data sheet revised: 26 March 2004

Art. no.: 1602

Version: 0001

Product: ANTIFROGEN N 34% AQUEOUS MIXTURE

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## Material safety data sheet

According to EEC-directive 91/155

### 1. Identification of the substance / preparation and company

#### ANTIFROGEN N 34% AQUEOUS MIXTURE

**Company:**

GHC Gerling, Holz & Co. Handels GmbH  
Ruhrstrasse 113  
22761 Hamburg  
Germany

Phone: +49 (0) 40 - 853 123 - 0  
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### 2. Composition / Information on ingredients

**Chemical characterization:** Monoethylene glycol (1,2 ethane diol) with inhibitors  
(34% active)

**Hazardous ingredients:**

Ethanediol

Concentration: 34%  
CAS number: 107-21-1  
EINECS number: 203-473-3  
Hazard symbols: Xn  
R phrases: 22

Sodium nitrite

|                 |           |    |    |
|-----------------|-----------|----|----|
| Concentration:  | < 0.15%   |    |    |
| CAS number:     | 7632-00-0 |    |    |
| EINECS number:  | 231-555-9 |    |    |
| Hazard symbols: | O         | T  | N  |
| R phrases:      | 8         | 25 | 50 |

### 3. Hazards identification

Harmful if swallowed.

### 4. First aid measures

|                      |   |
|----------------------|---|
| General information: | Remove soiled or soaked clothing immediately.   |
| After inhalation:    | When inhaled remove to fresh air and seek medical aid.  |
| Skin/ eye contact:   | In case of contact with skin wash off immediately with plenty of water. In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice. |
| After ingestion:     | Summon a doctor immediately.  |

### 5. Fire fighting measures

|   |  |
|---|--|
| Suitable extinguishing media:   | Product itself is not combustible; fire extinguishing method of surrounding areas must be discussed. |
| Special hazards from the substance itself, its combustion products or from its vapours: | In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)                        |

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Special protective equipment for fire-fighting: Use self-contained breathing apparatus.

## 6. Accidental release measures

Personal precautions: Ensure adequate ventilation.  
Wear suitable personal protective equipment.

Environmental precautions: Do not allow to enter drains or waterways.

Methods for cleaning up: Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). Dispose of as prescribed.

## 7. Handling and storage

Advice on safe handling: Open and handle container with care.  
Provide good ventilation of working area (local exhaust ventilation if necessary)

Advice on protection against fire and explosion: The product is not combustible

Storage stability: Storage time >24 months

## 8. Exposure controls / personal protection

### Ingredients with occupational exposure limits to be monitored

#### ETHYLENE GLYCOL

CAS number: 107-21-1

EU. Indicative exposure and directives relating to the protection of risks related to work exposure to chemical, physical and biological agents.

EU exposure limit values data

Revision : 07 2000

Time weighted Average (TWA):

Values: 52 mg/m<sup>3</sup> 20 ppm

Skin designation

Can be absorbed through the skin

Short term exposure limit (STEL):

Values: 104 mg/m<sup>3</sup> 40 ppm

General protective measures: Do not inhale vapours.

Hygiene measures: Keep away from foodstuffs and beverages.

Respiratory protection: Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure.  
Full mask to standard DIN EN 136  
Filter A (organic gases and vapours) to standard DIN EN 141.  
The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume.  
Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national regulations.



**Hand protection:**

For long-term exposure:

Butyl rubber gloves.  
Minimum breakthrough time / gloves: 480 min  
Minimum thickness / gloves: 0.7 mm

For short-term exposure (splash protection):

Nitrile rubber gloves.  
Minimum breakthrough time / gloves: 30 min  
Minimum thickness / gloves: 0.4 mm

These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

**Eye protection:**

Safety glasses

**9. Physical and chemical properties**

|   |                                 |   |
|---|---------------------------------|---|
| Form:   | Liquid                          |   |
| Colour:                                       | Light yellow                    |   |
| Odour:  | perceptible                     |   |
| Change of physical state:                     | Solidifying Point:              | -20 °C<br>(Method: DIN 51583)<br>approx. 105 °C |
|   | Boiling point/ boiling range:   |   |
| Flash point:                                  | None                            |   |
| Ignition temperature:                         | None                            |   |
| Oxidizing properties:                         | Not applicable                  |   |
| Self-ignition temperature:                    | Not self-igniting               |   |
| Lower explosion limit:                        | Not determined                  |   |
| Upper explosion limit:                        | Not determined                  |   |
| Evaporation rate:                             | Not applicable                  |   |
| Vapour pressure:                              | < 0.1 mbar (20 °C)              |   |
| Solubility mg/l water:                        | (20 °C) Miscible                |   |
| Density:                                      | 1.059 g/cm <sup>3</sup> (20 °C) |   |
| Bulk density:                                 | Not applicable                  |   |
| pH value:                                     | 7.8 - 8.3                       |   |
| Octanol/water partition coefficient (log Pow) | Not applicable                  |   |
| Viscosity (dynamic):                          | 2.7 mPa.s (20 °C)               |   |
| Viscosity (kinematic):                        | Not determined                  |   |
| Combustion number:                            | Not applicable                  |   |

**10. Stability and reactivity**

|                        |                                       |
|------------------------|---------------------------------------|
| Thermal decomposition: | > 200 °C                              |
| Hazardous reactions:   | Incompatible with oxidizing materials |

**11. Toxicological information**

|                            |   |
|----------------------------|---|
| Acute oral toxicity:       | LD 50 4,000 mg/kg (rat)<br>Source: IUCLID<br>Information based on the main component. |
| Acute inhalation toxicity: | Not determined  |
| Acute dermal toxicity:     | Not determined  |

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|                          |   |
|--------------------------|---|
| Irritant effect on skin: | Non-irritant  |
| Irritant effect on eyes: | Slightly irritant   |
| Sensitization:           | Not determined  |
| Mutagenicity:            | Not determined  |
| Remarks:                 | Vapours and mists cause irritation/ burns to eyes and respiratory tract.<br>There is a possibility of kidney damage.<br>Poisoning affects the central nervous system.<br>The data on toxicology refer to the active ingredient. |

## 12. Ecological information

|                   |   |
|-------------------|---|
| General:          | If handled correctly it causes no disturbance in treatment plants. The ecological number information is based on the undiluted product. |
| Biodegradability: | 90%, good degradability (Method: Zahn-Wellens test)   |
| Fish toxicity:    | LC50, 1,500 mg/l (golden orfe)  |

## 13. Disposal considerations

|          |   |
|----------|---|
| General: | In accordance with local authority regulations, take to special waste incineration plant. |
|----------|---|

## 14. Transport information

|       |                |
|-------|----------------|
| IATA: | Not restricted |
| IMDG: | Not restricted |
| ADR:  | Not restricted |
| RID:  | Not restricted |
| ADNR: | Not restricted |

## 15. Regulatory information

|   |  |
|---|--|
| Labelling in accordance with EC-Directives: | Hazard warning labelling compulsory.<br>Classification according to the calculation procedure of the Dangerous Preparations Directive (1999/45/EC)   |
| Hazard symbols:                             | Xn Harmful<br>Hazardous components to be indicated on label Ethanediol.  |
| R-phrases                                   | 22 Harmful if swallowed  |
| S-phrases                                   | 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice<br>28.2 After contact with skin wash immediately with water and soap<br>37/39 Wear suitable gloves and eye/face protection. |

## 16. Other information

**Text of the R phrases which are allocated to the ingredients/components mentioned in section 2 of this safety data sheet.**

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- |    |   |
|----|---|
| 22 | Harmful if swallowed.                             |
| 25 | Toxic if swallowed.                               |
| 50 | Very toxic to aquatic organisms.                  |
| 8  | Contact with combustible material may cause fire. |

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties.

Recipients of our product must take responsibility for observing existing laws and regulations