

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.09.2012

2547008

Revision: 19.09.2012

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

Product identifier

Trade name:

DMG FREEZE 48

Application / Use:

Antifreeze

Article number:

1040900

Relevant identified uses of the substance or mixture and uses advised against:

No further relevant information available.

Application of the substance / the preparation:

Antifreeze Fluid

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Hermann Bantleon GmbH
 Blaubeurer Strasse 32
 D - 89077 Ulm
 Tel: +49 (0) 731 / 3990-0
 Fax: +49 (0) 731 / 3990-10

Further information obtainable from:

Department: safety / environment
 Contact specialist: hse@bantleon.de


Emergency telephone number:

In case of emergency ONLY:
 During working hours (CET):
 +49 (0) 731 / 39 90 260 or +49 (0) 731 / 39 90 250
 Emergency response (24 hours) CHEMTREC:
 +1-703-527-3887
 +44-870-8200418 (United Kingdom)
 +31-858880596 (Netherlands)
 0-800-983-611 (South Africa)

2 Hazards identification

Classification of the substance or mixture

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

 Xn; Harmful

R22: Harmful if swallowed.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version. The classification is according to the latest editions of the EU-lists, and extended by company and literature data.


Classification system:

Label elements

Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

 Xn Harmful

Hazard-determining components of labelling:

Ethanediol

Risk phrases:

22 Harmful if swallowed.

Safety phrases:

23 Do not breathe vapour/spray.
 29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
 36 Wear suitable protective clothing.

Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

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vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization:**Description:** Mixture**Dangerous components:**

CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28	Ethanediol	Xn R22	50-100%
EINECS: 243-283-8	Sodium 2-ethylhexanoate (CAS: 19766-89-3)	Xn R63	< 5%
CAS: 12179-04-3 EINECS: 215-540-4 Reg.nr.: 01-2119490790-32	Disodium tetraborate pentahydrate	T Repr. Cat. 2 R60-61	≤1.0%

SVHC

12179-04-3 | Disodium tetraborate pentahydrate

Additional information:

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.
Components with threshold limit values are mentioned at section 8.

4 First aid measures

Description of first aid measures**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

Position and transport stably in side position.

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

Induce vomiting and call for medical help.

Call for a doctor immediately.

Seek immediate medical advice.

Treat symptomatically.

Information for doctor:**Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media**Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

Water spray

Alcohol resistant foam

For safety reasons unsuitable extinguishing agents:

Do not use water with full jet.

Special hazards arising from the substance or mixture:

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Sulphur dioxide (SO₂)**Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Particular danger of slipping on leaked/spilled product.
Wear protective clothing.

Environmental precautions:

Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Prevent from spreading (e.g. by damming-in or oil barriers).

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling:

When handling product in drums use safety footwear and suitable tools. At work please do not eat, drink or smoke.

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about fire - and explosion protection:

Fire class DIN EN 2: B

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.
Provide floor trough without outlet.
Prevent any seepage into the ground.
Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility:

Store away from foodstuffs.
Store away from oxidizing agents.

Further information about storage conditions:

Recommended storage temperature: 5 to 40 °C
The storage in galvanized containers is not recommended.
Do not store below freezing point (for pour point see Chapter 9 MSDS).

Shelf life from date of dispatch:

Maximum 1 year

Storage class:

10 (acc. TRGS 510 Germany): flammable liquids

Specific end use(s)

No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities:

No further data; see item 7.

Control parameters

Ingredients with limit values that require monitoring at the workplace:

107-21-1 Ethanediol (50-100%)

WEL	Short-term value: 104** mg/m ³ , 40** ppm
	Long-term value: 10* 52** mg/m ³ , 20** ppm
	Sk *particulate **vapour

Additional Occupational Exposure Limit Values for possible hazards during processing:

Not applicable

Additional information:

The lists valid during the making were used as basis.
If formation of steam, mist or aerosols take place the concentration in the air has to be kept at the the lowest possible level.

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Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Respiratory protection:

Use suitable respiratory protective device only when aerosol or mist is formed.

In general not necessary.

Protection of hands:

Material of gloves

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level \geq 6

Eye protection:

Goggles recommended during refilling.

Body protection:

Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:

Fluid

Colour:

Dark blue

Odour:

Mild

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition

Melting point/Melting range:

< -18°C (DIN ISO 3016)

Boiling point/Boiling range:

> 160°C (DIN ISO 3405)

Drip point:

Not determined.

Flash point:

> 120°C (DIN ISO 2592)

Flammability (solid, gaseous):

Not applicable.

Ignition temperature:

Not applicable.

Decomposition temperature:

Not determined.

Self-igniting:

Product is not selfigniting.

Danger of explosion:

The product shows no danger of explosion, but it may build explosive mixtures with air (by vaporisation, oil mist formation, heating above the flash point).

Explosion limits:

Lower:

4.9 Vol % (typ.)

Upper:

15 Vol % (typ.)

Vapour pressure at 20°C:

< 0.1 hPa (-)

Density at 20°C:

1.122 g/cm³ (DIN 51 757)

Relative density

Not determined.

Vapour density

Not determined.

Evaporation rate

Not determined.

Solubility in / Miscibility with

water:

Fully miscible.

Partition coefficient (n-octanol/water):

Not determined.

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Viscosity:

Kinematic at 20°C:

20 - 30 mm²/s (DIN 51 562)**10 Stability and reactivity****Reactivity****Chemical stability****Thermal decomposition / conditions to be avoided:** Avoid extreme temperatures and direct sunlight.**Possibility of hazardous reactions**

Reacts with strong oxidizing agents.

Hazardous decomposition products:

No dangerous decomposition products known.

Additional information:

Product is not classified as inflammable but can burn.

11 Toxicological information**Information on toxicological effects****Acute toxicity:****LD/LC50 values relevant for classification:**

Inhalative	LC50/8h	> 100 mg/m ³ (fish)
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107-21-1 Ethanediol

Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

Primary irritant effect:**on the skin:**

No irritant effect.

on the eye:

No irritant effect.

by inhalation:

No irritant effect expected.

Subacute to chronic toxicity:

Prolonged and /or repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials.

Additional toxicological information:The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful**12 Ecological information****Toxicity****Aquatic toxicity:****107-21-1 Ethanediol**

EC50/48h	> 100 mg/l (Daphnia magna)
EC50/72h	> 100 mg/l (seaweed)
LC50/96h	> 100 mg/l (Leuciscus idus)

Persistence and degradability**Other information:**

Details for elimination:

Test method: OECD 301

Method of analysis: reduction of DOC

Elimination grade: > 70%

Behaviour in environmental systems:**Bioaccumulative potential**

No further relevant information available.

Mobility in soil

No further relevant information available.

Additional ecological information:**General notes:**Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.**Results of PBT and vPvB assessment****PBT:**

Not applicable.

vPvB:

Not applicable.

Other adverse effects:

No further relevant information available.

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13 Disposal considerations

Waste treatment methods**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

16 01 14* antifreeze fluids containing dangerous substances

Uncleaned packaging:**Recommendation:**

Clean packing completely. Handover to authorized disposal company.

Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Recommended cleansing agents:

Water, if necessary together with cleansing agents.

14 Transport information

UN-Number

ADR, ADN, IMDG, IATA

Void

UN proper shipping name

ADR, ADN, IMDG, IATA

Void

Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Void

Packing group

ADR, IMDG, IATA

Void

Environmental hazards:**Marine pollutant:**

No

Special precautions for user

Not applicable.


Transport in bulk according to Annex II of MARPOL73/78 and**the IBC Code**

Not applicable.

15 Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture**Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product: Xn Harmful**Hazard-determining components of labelling:**

Ethanediol

Risk phrases:

22 Harmful if swallowed.

Safety phrases:

23 Do not breathe vapour/spray.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

36 Wear suitable protective clothing.

National regulations:**Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Waterhazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations**Substances of very high concern (SVHC) according to REACH, Article 57**

12179-04-3 Disodium tetraborate pentahydrate

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16 Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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Relevant phrases

R22 Harmful if swallowed.
R60 May impair fertility.
R61 May cause harm to the unborn child.
R63 Possible risk of harm to the unborn child.

Department issuing MSDS:

Contact:

Department of Environmental Protection
hse@bantleon.de

* Data compared to the previous version altered.