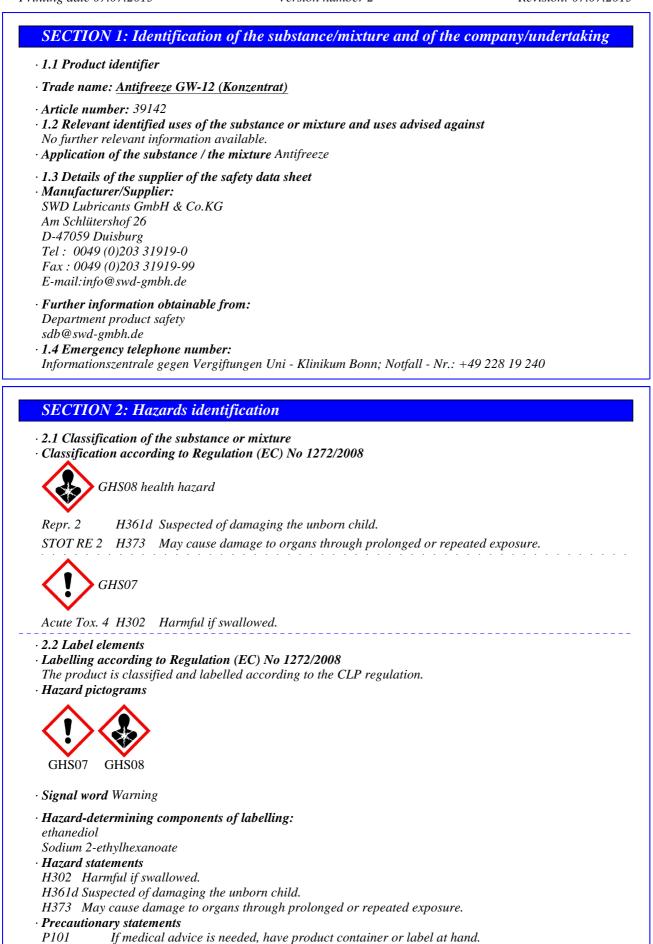


Printing date 07.07.2015

Version number 2

Revision: 07.07.2015



(Contd. on page 2)

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## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2015

Version number 2

Revision: 07.07.2015

#### Trade name: Antifreeze GW-12 (Konzentrat)

|   | (Contd. of page 1)   |  |  |  |  |
|---|--|--|--|--|--|
| P102  | Keep out of reach of children.   |  |  |  |  |
| P103  | Read label before use.   |  |  |  |  |
| P260  | Do not breathe dust/fume/gas/mist/vapours/spray.                                       |  |  |  |  |
| P281  | Use personal protective equipment as required.   |  |  |  |  |
| P301+P31  | 2 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.                        |  |  |  |  |
| P308+P31  | 3 IF exposed or concerned: Get medical advice/attention.                               |  |  |  |  |
| P405  | Store locked up.   |  |  |  |  |
| P501  | Dispose of contents/container in accordance with local/regional/national/international |  |  |  |  |
|   | regulations.   |  |  |  |  |
| · 2.3 Other hazards                               |  |  |  |  |  |
| · Results of PBT and vPvB assessment              |  |  |  |  |  |
| • <b>PBT:</b> Not applicable.                     |  |  |  |  |  |
| • <b>vPvB:</b> Not                                | applicable.  |  |  |  |  |
|   |  |  |  |  |  |
|   |  |  |  |  |  |
| SECTION 3: Composition/information on ingredients |  |  |  |  |  |
|   |  |  |  |  |  |

· 3.2 Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

| · Dangerous components: |   |         |  |  |  |
|-------------------------|---|---------|--|--|--|
|                         |   | 50-100% |  |  |  |
| EINECS: 203-473-3       | 🚸 STOT RE 2, H373; 🚸 Acute Tox. 4, H302 |         |  |  |  |
|                         | ~~~~~~                                  | 2.5-10% |  |  |  |
| EINECS: 243-283-8       | 🚸 Repr. 2, H361d                        |         |  |  |  |
| • SVHC None             |   |         |  |  |  |

• Additional information: For the wording of the listed risk phrases refer to section 16.

## **SECTION 4: First aid measures**

· 4.1 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.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Call for a doctor immediately.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

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

No further relevant information available.

## **SECTION 5: Firefighting measures**

#### · 5.1 Extinguishing media

· Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray. Use fire extinguishing methods suitable to surrounding conditions.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- $\cdot$  5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be released: Carbonmonoxide and Carbondioxide
- · 5.3 Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

(Contd. on page 3)

GB



Printing date 07.07.2015

## Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

Revision: 07.07.2015

(Contd. of page 2)

#### Trade name: Antifreeze GW-12 (Konzentrat)

#### · Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

### **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures Keep people at a distance and stay on the windward side.
6.2 Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 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 item 13. Ensure adequate ventilation.

6.4 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.

## **SECTION 7: Handling and storage**

• 7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

· Information about fire - and explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

• Requirements to be met by storerooms and receptacles: No special requirements.

· Information about storage in one common storage facility: Not required.

• Further information about storage conditions: Storage in a collecting room is required.

· 7.3 Specific end use(s) No further relevant information available.

## SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

#### · Ingredients with limit values that require monitoring at the workplace:

#### 107-21-1 ethanediol

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

· Additional information: The lists valid during the making were used as basis.

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 4)

<sup>· 8.2</sup> Exposure controls

GB



Printing date 07.07.2015

#### Version number 2

Revision: 07.07.2015

#### Trade name: Antifreeze GW-12 (Konzentrat)

(Contd. of page 3)

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Not suitable are gloves made of the following materials: Leather gloves
- Eye protection: Goggles recommended during refilling

#### **SECTION 9: Physical and chemical properties**

| General Information<br>Appearance:   | clear   |
|--------------------------------------|---|
| Form:                                | Fluid   |
| Colour:                              | According to product specification  |
| Odour:                               | Mild  |
| Odour threshold:                     | Not determined.   |
| pH-value:                            | Not determined.   |
| Change in condition                  |   |
| Melting point/Melting range:         | Undetermined.   |
| Boiling point/Boiling range:         | 180 °C (DIN 51751)  |
| Pour point                           | Not applicable  |
| Flash point:                         | > 120 °C (DIN ISO 2592)   |
| Flammability (solid, gaseous):       | Not applicable.   |
| Ignition temperature:                | 410 °C (DIN 14522)  |
| Decomposition temperature:           | Not determined.   |
| Self-igniting:                       | Not determined.   |
| Danger of explosion:                 | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| Explosion limits:                    |   |
| Lower:                               | 3.2 Vol % (DIN EN 1839)   |
| Upper:                               | 53.0 Vol % (DIN EN 1839)  |
| Vapour pressure at 20 °C:            | 0.1 hPa   |
| Density at 20 °C:                    | 1.1 g/cm <sup>3</sup> (DIN 51757)   |
| Relative density                     | Not determined.   |
| Vapour density                       | Not determined.   |
| Evaporation rate                     | Not determined.   |
| Solubility in / Miscibility with     |   |
| water:                               | Fully miscible.   |
| Partition coefficient (n-octanol/wat | er). Not determined   |



Printing date 07.07.2015

Version number 2

#### Trade name: Antifreeze GW-12 (Konzentrat)

| <b>T</b> 7*           |  | (Contd. of page |
|-----------------------|--|-----------------|
| Viscosity:            |  |                 |
| Dynamic:              | Not determined.                            |                 |
| Kinematic:            | Not determined.                            |                 |
| Solvent content:      |  |                 |
| Organic solvents:     | 0.0 %                                      |                 |
| 9.2 Other information | No further relevant information available. |                 |

## SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions

Reacts with strong acids and oxidising agents.

Reacts with strong oxidising agents.

- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

#### **SECTION 11: Toxicological information**

· 11.1 Information on toxicological effects

· Acute toxicity

· LD/LC50 values relevant for classification:

#### 107-21-1 ethanediol

Oral LD50 5840 mg/kg (rat)

Dermal LD50 9530 mg/kg (rabbit)

- · Primary irritant effect:
- · Skin corrosion/irritation No irritant effect.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- · 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:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

Harmful

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

*CMR effects (carcenogenic, mutagenic and toxicity for reproduction) are not known for these products. Repr. 2* 

## **SECTION 12: Ecological information**

· 12.1 Toxicity

• Aquatic toxicity:

107-21-1 ethanediol

EC50 6500 mg/kg (Alg)

13000 mg/kg (SwF)

9300 mg/kg (daphnia)

· 12.2 Persistence and degradability Easily biodegradable

(Contd. on page 6)

GB



Printing date 07.07.2015

#### Version number 2

Revision: 07.07.2015

(Contd. of page 5)

#### Trade name: Antifreeze GW-12 (Konzentrat)

- 12.3 Bioaccumulative potential Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- · 12.4 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 undiluted product or large quantities of it to reach ground water, water course or sewage system.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

### **SECTION 13: Disposal considerations**

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Delivery of waste oil to offically authorised collectors only.

 $\cdot$  European waste catalogue

16 01 14\* antifreeze fluids containing dangerous substances

- · Uncleaned packaging:
- · Recommendation:
- Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

| 14.1 UN-Number                           |                 |  |
|--|-----------------|--|
| ADR, ADN, IMDG, IATA                     | Void            |  |
| 14.2 UN proper shipping name             |                 |  |
| ADR, ADN, IMDG, IATA                     | Void            |  |
| 14.3 Transport hazard class(es)          |                 |  |
| ADR, ADN, IMDG, IATA                     |                 |  |
| Class                                    | Void            |  |
| 14.4 Packing group                       |                 |  |
| ADR, IMDG, IATA                          | Void            |  |
| 14.5 Environmental hazards:              |                 |  |
| Marine pollutant:                        | No              |  |
| 14.6 Special precautions for user        | Not applicable. |  |
| 14.7 Transport in bulk according to Anne | ex II of        |  |
| MARPOL73/78 and the IBC Code             | Not applicable. |  |

(Contd. on page 7)



Printing date 07.07.2015

#### Version number 2

Revision: 07.07.2015

#### Trade name: Antifreeze GW-12 (Konzentrat)

(Contd. of page 6)

### **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Labelling according to Regulation (EC) No 1272/2008
- The product is classified and labelled according to the CLP regulation.
- · Hazard pictograms



· Signal word Warning

• *Hazard-determining components of labelling: Contains: ethane-1,2diol ethanediol* 

Sodium 2-ethylhexanoate

- · Hazard statements
- H302 Harmful if swallowed.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- · Precautionary statements
- *P101 If medical advice is needed, have product container or label at hand.*
- P102 Keep out of reach of children.
- P103 Read label before use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P281 Use personal protective equipment as required.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P405 Store locked up.
- *P501* Dispose of contents/container in accordance with local/regional/national/international regulations.

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· National regulations:

· Additional classification according to Decree on Hazardous Materials, Annex II: Void

· Other regulations, limitations and prohibitive regulations

- · Substances of very high concern (SVHC) according to REACH, Article 57 None
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **SECTION 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.

*Relevant phrases*H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing MSDS: Product safety

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

GB



# Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2015

Version number 2

Revision: 07.07.2015

### Trade name: Antifreeze GW-12 (Konzentrat)

|  | (Contd. of page 7) |
|--|--------------------|
| EINECS: European Inventory of Existing Commercial Chemical Substances            |                    |
| ELINCS: European List of Notified Chemical Substances                            |                    |
| CAS: Chemical Abstracts Service (division of the American Chemical Society)      |                    |
| LC50: Lethal concentration, 50 percent   |                    |
| LD50: Lethal dose, 50 percent  |                    |
| Acute Tox. 4: Acute toxicity, Hazard Category 4                                  |                    |
| Repr. 2: Reproductive toxicity, Hazard Category 2                                |                    |
| STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2 |                    |
| · Sources Concawe Product Dossier No.97/108. Concawe Product Dossier Nn. 01/54.  |                    |
| • * Data compared to the previous version altered.                               |                    |