

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

Printing date 27.10.2011

Version number 2

Revision: 27.10.2011

**1 Identification of the substance/mixture and of the company/undertaking**· **1.1 Product identifier**· Trade name: PROTEKT S plus / PROTEKT B plus

· Article number: SAP18565

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

· Application of the substance / the preparation Antifreeze

· **1.3 Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

L&amp;B Protekt GmbH

Neuhofstrasse 86 b

CH-8590 Romanshorn

Tel +41 71 414 04 38

Fax +41 71 414 04 34

E-Mail: info@protekt.ch

· **1.4 Emergency telephone number:**

Swiss Toxicological Information Centre

CH-8032 ZÜRICH

Tel.: +41 44 251 51 51

National emergency call: 145

**2 Hazards identification**· **2.1 Classification of the substance or mixture**

· Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

· 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.

· **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· **2.2 Label elements**· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS08

· **Signal word** Warning· **Hazard-determining components of labelling:**

ethylene glycol

Sodium 2-ethylhexanoate

· **Hazard statements**

H361 Suspected of damaging fertility or the unborn child.

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

· **Precautionary statements**

P201 Obtain special instructions before use.

(Contd. on page 2)

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Version number 2

Revision: 27.10.2011

**Trade name: PROTEKT S plus / PROTEKT B plus**

(Contd. of page 1)

- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- 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.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.




**3 Composition/information on ingredients**



- **3.2 Chemical characterization: Mixtures**

• **Description:**

Mixture of the substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 107-21-1	ethylene glycol	50-100%
EINECS: 203-473-3	 Xn R22	
Index number: 603-027-00-1	 STOT RE 2, H373;  Acute	
RTECS: KW 2975000	Tox. 4, H302	
Reg.nr.: 01-2119456816-28-XXXX		

CAS: 19766-89-3	Sodium 2-ethylhexanoate	2.5-10%
EINECS: 243-283-8	 Xn R63	
	 Repr. 2, H361	

• **Additional information**

For the wording of the listed risk phrases refer to section 16.

**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 rinse with water.

If skin irritation continues, consult a doctor.

• **After eye contact**

Rinse opened eye for 15 minutes under running water. Then consult a doctor.

• **After swallowing**

Rinse out mouth.

Call for a doctor immediately.

• **Information for doctor**

Repeated exposure may cause skin dryness or skin disease (dermatitis).

- **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.

**5 Firefighting measures**

- **5.1 Extinguishing media**

• **Suitable extinguishing agents**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents** Water with full jet.

- **5.2 Special hazards arising from the substance or mixture**

Carbon monoxide (CO)

(Contd. on page 3)

**Safety data sheet**  
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Printing date 27.10.2011

Version number 2

Revision: 27.10.2011

**Trade name: PROTEKT S plus / PROTEKT B plus**

(Contd. of page 2)

Carbon dioxide (CO<sub>2</sub>)

Formation of explosive gas-air mixtures is possible during heating or in case of fire.

- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

**6 Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Not required.
- **6.2 Environmental precautions:**  
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).  
Clean the affected area carefully; suitable cleaners are:  
Clean up with water.  
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.

**7 Handling and storage**

- **Handling**
- **7.1 Precautions for safe handling**  
Ensure good interior ventilation, especially at floor level (fumes are heavier than air).  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Provide solvent resistant floor.  
Suitable material for receptacles and pipes: Stainless steel.  
Suitable material for receptacles and pipes: Polypropylene.  
Unsuitable material for receptacles and pipes: Aluminium.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Protect from humidity and water.  
This product is hygroscopic.
- **7.3 Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:**  
No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
**107-21-1 ethylene glycol**  
WEL (Great Britain) 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  
MAK (Switzerland) Short-term value: 52 mg/m<sup>3</sup>, 20 ppm  
Long-term value: 26 mg/m<sup>3</sup>, 10 ppm  
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- **Additional information:**  
The lists that were valid during the creation were used as basis.

(Contd. on page 4)

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

Printing date 27.10.2011

Version number 2

Revision: 27.10.2011

**Trade name: PROTEKT S plus / PROTEKT B plus**

(Contd. of page 3)

- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Do not eat, drink, smoke or sniff while working.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.
- **Breathing equipment:**  
Not necessary if room is well-ventilated.  
In case of fume/aerosol use respiratory protection.  
Combination filter A-P2.



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**  
Solvent resistant gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
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 through 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  
Textile gloves
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Solvent resistant protective clothing

**9 Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
- **Molecular weight:**
- **Appearance:**

Form:	fluid
Colour:	blue / green
- **Odour:** slightly sweetish
- **Odour threshold:** Not determined.
- **pH-value:** not applicable
- **Change in condition**

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
- **Flash point:** not applicable
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:** 410°C
- **Decomposition temperature:** Not determined.
- **Self igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 5)

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Version number 2

Revision: 27.10.2011

Trade name: PROTEKT S plus / PROTEKT B plus

(Contd. of page 4)

- **Explosion limits:**
  - Lower: 3.2 Vol %
  - Upper: 15.3 Vol %
- **Vapour pressure at 20°C:** 0.1 hPa
- **Density at 20°C:** 1.2 g/cm<sup>3</sup>
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with**
  - Water: fully miscible
- **Segregation coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - dynamic: Not determined.
  - kinematic: Not determined.
- **9.2 Molecular weight** No further relevant information available.

**10 Stability and reactivity**

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Strong oxidizing agents.  
Strong acids.
- **10.6 Hazardous decomposition products:** Flammable gases/vapours.

**11 Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

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  - 107-21-1 ethylene glycol**
  - Oral LD50 4700 mg/kg (rat)
  - LDLo 786 mg/kg (man)
  - Dermal LD50 10483 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:** Mild irritation.
- **on the eye:** Mild irritation.
- **Sensitization:** No sensitising effects known.
- **Subacute to chronic toxicity:**  
Repeated and/or prolonged contact may cause liver and kidney damage.
- **Additional toxicological information:**  
Product is suspected to cause damage to fertility.  
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**

- **12.1 Toxicity**
- **Aquatic toxicity:**

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  - 107-21-1 ethylene glycol**
  - EC50/16h > 10000 mg/l (Pseudomonas putida)
  - EC50/24h 74000 mg/l (Daphnia magna)
  - LC50/48h > 10000 mg/l (Leuciscus idus)
  - LC50/96h > 18500 mg/l (Oncorhynchus mykiss)

(Contd. on page 6)

**Safety data sheet**  
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Version number 2

Revision: 27.10.2011

**Trade name: PROTEKT S plus / PROTEKT B plus**

(Contd. of page 5)

- **12.2 Persistence and degradability**  
No further relevant information available.
- **Behaviour in environmental systems:**
- **12.3 Bioaccumulative potential**  
No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Not harmful to water organisms.
- **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.

**13 Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must be disposed of in an incinerator for hazardous waste.



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

- **Uncleaned packagings:**
- **Recommendation:** Packaging can be reused or recycled after cleaning.

**14 Transport information**

- **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 Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

**15 Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Technical instructions (air):**
- **Class Share in %**
- **NK** 50-100
- **Water pollution class:**  
Water pollution class WGK 1 (self classification, D): slightly hazardous to water

(Contd. on page 7)

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(Contd. of page 6)

**· 15.2 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.

**· Relevant phrases**

H302 Harmful if swallowed.

H361 Suspected of damaging fertility or the unborn child.

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

R22 Harmful if swallowed.

R63 Possible risk of harm to the unborn child.

**· Department issuing MSDS: SCH****· 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)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent