

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.10.2011

Version: 3

Revision: 06.10.2011

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

- **Product identifier**
- **Trade name: SOLARLIQUID L KONZENTRAT (KG)**
- **Article number:** 391100
- **Relevant identified uses of the substance or mixture and uses advised against**
No data available
- **Application of the substance / the mixture**
Antifreeze
Heat carrier liquid for solar plants
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Staub & Co. Chemiehandelsgesellschaft mbH
Ostendstraße 124
D-90428 Nürnberg / Germany
Phone: +49 911 / 5482 - 0
- **E-mail address of the competent person responsible for the Safety Data Sheet:**
sdb@csb-online.de
- **Informing department:**
Staub & Co. Chemiehandelsgesellschaft mbH
Ostendstraße 124
D-90428 Nürnberg / Germany
Phone: +49 911 / 5482 - 0
- **Emergency telephone number:**
For Germany: Giftinformationszentrum Universitätsklinik Mainz
Phone: +49 6131 / 19240

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** void
- **Information concerning particular hazards for human and environment:** void
- **Classification system:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:**
Mixture

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based of Propane-1,2-diol and Amine derivatives.

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- Dangerous components:

CAS: 57-55-6	1,2-Propandiol	50-100%
EINECS: 200-338-0 substance with a Community workplace exposure limit		

4 First aid measures**- Description of first aid measures****- General information** Remove any clothing soiled by the product.**- After inhalation:** Supply fresh air; consult doctor in case of symptoms.**- After skin contact:**

The product is not skin irritating.

Instantly wash with water and soap and rinse thoroughly.

- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

- After swallowing:

Rinse out mouth and then drink plenty of water.

In case of persistent symptoms consult doctor.

- 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:**Carbon dioxide (CO₂), extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.**- For safety reasons unsuitable extinguishing agents** Water with a full water jet.**- Special hazards arising from the substance or mixture:**Carbon monoxide (CO) and carbon dioxide (CO₂)Nitrogen oxides (NO_x)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

- Advice for firefighters**- Protective equipment:** Wear self-contained breathing apparatus.**- Additional information**

Cool endangered containers with water spray.

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

If without risk possible, move drums with material away from dangerous area.

6 Accidental release measures**- Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Use breathing protection against the effects of fumes/dust/aerosol.

Avoid contact with the eyes and skin.

Keep people at a distance and stay on the windward side.

- Environmental precautions:

Do not allow to enter drainage system, surface or ground water.

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- Inform respective authorities in case product reaches water or sewage system.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable containers.
Dispose of the material collected according to regulations.
 - **Reference to other sections**
See Section 8 for information on personal protection equipment.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with the eyes.
Avoid prolonged/repeated skin contact.
Do not inhale fumes/aerosols.
Make sure that all applicable workplace limits are observed.
- **Information about protection against explosions and fires:**
Protect from heat.
The product forms flammable fumes when heated.
Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
- **Further information about storage conditions:**
Store container in a well ventilated position.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
- **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.
 - **Control parameters**
 - **Components with critical values that require monitoring at the workplace:**
-
- 57-55-6 1,2-Propandiol**
WEL (Great Britain) Long-term value: 474* 10** mg/m³, 150* ppm
*total vapour and particulates **particulates
- **Additional information:** The lists that were valid during the compilation were used as basis.
 - **Exposure controls**
 - **Personal protective equipment**
 - **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Do not eat or drink while working.
Do not inhale gases/fumes/aerosols.
Avoid contact with the eyes.

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Avoid close or long term contact with the skin.

Wash hands during breaks and at the end of the work.

Use skin protection cream for preventive skin protection.

- **Breathing equipment:** Use breathing protection only when aerosol or mist is formed.

- **Protection of hands:**

Protective gloves.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Check protective gloves prior to each use for their proper condition.

To avoid skin problems reduce the wearing of gloves to the required minimum.

- **Material of gloves**

Nitrile rubber - NBR

Recommended thickness of the material: ≥ 0.11 mm

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**

Protective gloves should be replaced at first signs of wear.

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

- **Eye protection:** Safety glasses recommended

- **Body protection:**

Protective work clothing.

Protective clothing should be selected specifically for the working place.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: fluid

Colour: clear

- **Smell:** nearly odourless

- **Odour threshold:** No data available

- **pH-value:** Not determined

- **Change in condition**

Melting point/Melting range: Not applicable

Boiling point/Boiling range: > 100 °C

- **Flash point:** > 100 °C (1,2-Propandiol)

- **Inflammability (solid, gaseous)** Product is not inflammable.

- **Ignition temperature:** No data available

- **Decomposition temperature:** Not determined

- **Self-inflammability:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.

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- **Critical values for explosion:**
 - Lower:** 2.6 Vol % (1,2-Propandiol)
 - Upper:** 12.6 Vol % (1,2-Propandiol)
- **Oxidizing properties** Not applicable
- **Steam pressure:** Not determined
- **Density at 20°C** ~1.04 g/cm³
- **Settled apparent density** Not applicable
- **Vapour density (Air = 1)** Not determined
- **Evaporation rate (Ether = 1)** Not determined
- **Solubility in / Miscibility with**
 - Water:** fully miscible
 - Organic solvents:** Not determined
- **Segregation coefficient (n-octanol/water):** Not determined
- **Viscosity:**
 - dynamic:** Not determined
 - kinematic:** Not determined
- **Other information** Further informations please refer to technical data sheet.

* 10 Stability and reactivity

- **Reactivity**
- **Chemical stability** stable
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Reacts with strong oxidizing agents.
Formation of nitrosamines possible.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
Strong oxidizing agents
Strong acids
- **Hazardous decomposition products:**
Carbon monoxide (CO) and carbon dioxide (CO₂)
Nitrogen oxides (NO_x)

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
 - **LD/LC50 values that are relevant for classification:**
-
- 57-55-6 1,2-Propandiol**
- Oral LD50 20000 mg/kg (rat)
 - Dermal LD50 20800 mg/kg (rbt)
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** Short time, reversible irritating effect.
 - **Sensitization:** No sensitizing effect known.

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- Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EC 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 according to our experience and the information provided to us.

12 Ecological information**- Toxicity****- Aquatic toxicity:****57-55-6 1,2-Propandiol**

LC0/24 h 50000 mg/l (Salmo gairdneri)

EC50 > 20000 mg/l (Pseudomonas putida)

LC50/48 h 43500 mg/l (Water flea (Daphnia magna))

LC50/96 h > 100 mg/l (Carassius auratus)

54900 mg/l (Pimephales promelas)

- Persistence and degradability No further relevant information available.**- Behaviour in environmental systems:****- Bioaccumulative potential** No further relevant information available.**- Mobility in soil** No further relevant information available.**- Additional ecological information:****- CSB-value:** Not determined**- BSB5-value:** Not determined**- General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**- Results of PBT and vPvB assessment****- PBT:** Not applicable.**- vPvB:** Not applicable.**- Other adverse effects** No further relevant information available.**13 Disposal considerations****- Waste treatment methods****- Recommendation:** Disposal must be made according to official regulations.**- Waste disposal key number:**

The waste disposal key number has to be classified according to the European waste catalogue corresponding to the branch of industry and processing of the product.

- European waste catalogue

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

- Uncleaned packagings:**- Recommendation:** Disposal must be made according to official regulations.**- Recommended cleaning agent:** Water, if necessary with cleaning agent.**14 Transport information****- UN-Number****- ADR, ADN, IMDG, IATA**

Void

- UN proper shipping name**- ADR, ADN, IMDG, IATA**

Void

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- **Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **ADR, IMDG, IATA** Void
- **Environmental hazards:** Not applicable.
- **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.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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.

- Department issuing data specification sheet:

C.S.B. GmbH Tel.: +49 2151/652086-0
 Parkstraße 29 Fax: +49 2151/652086-9
 D-47829 Krefeld
 Germany

- Date of issue: 28.09.2010**- 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

- * Data compared to the previous version altered.