



Safety Data Sheet according to 1907/2006/EG, Article 31

Printing Date: 19.06.2015

Revision: 20.11.2014

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

- **1.1 Product identifier**
- **Trade name: Solarliquid VT51 ready to use**
- **Article number: 80007 / 80008**
- **1.2 Relevant identified uses of the substance or mixture and uses advise against**
No further relevant information available.
- **Application of the substance / the mixture:** antifreeze, transfer liquid for solar systems
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
AkoTec Produktionsgesellschaft
Grundmühlenweg 3
D-16278 Angermünde
Tel.: 03331 29 66 88
Mail: info@akotec.eu
- **Informing Department:**
Sales / Technical Department
Mail: info@akotec.eu
- **1.4 Emergency information centre:**
next poison control center

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
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- **2.2 Label elements**
Labelling according to Regulation (EC) No 1272/2008: Void
 - **Hazard pictograms:** Void
 - **Signal word:** Void
 - **Hazard statements:** Void
 - **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.



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SECTION 3: Composition / information on ingredients

- **3.2 Mixtures**
- **Description:** Aqueous solution of 1,2-propanediol and amine derivatives
- **Dangerous components:** Void

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General advice:** Instantly 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.
Wash with water.
- **After eye contact:**
Rinse opened eye for 15 minutes under running water.
In case of persistent symptoms consult doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.
- **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:** Use firefighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire:
carbon monoxide (CO)
carbon dioxide (CO₂)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus. See section 8.
- **Additional information**
Endangered containers in the surrounding area should be cooled with a water-hose.
Collect contaminated firefighting water separately. It must not enter drains.
Dispose of fire debris and contaminated firefighting water in accordance with official regulations.
Move containers from area of the fire if this can be done without risk.



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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.
Ensure adequate ventilation
Use breathing protection against the effects of fumes/dust/aerosol.
Avoid eye and skin contact.

- **6.2 Environmental precautions:**

Do not allow to enter drainage system, surface or ground water.
Inform respective authorities in case product reaches water or sewage system.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Send for recovery or disposal in suitable containers.
Contaminated material has to be disposed as waste (see item 13)

- **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 information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- **Schutzmaßnahmen zur sicheren Handhabung**

Ensure good ventilation/exhaustion at the workplace.
Do not breathe vapor. Avoid contact with skin, eyes and clothing.
Pay attention to the observance of the occupational limit value and other limit values.

- **Information about protection against explosions and fires:**

Pay attention to general rules of internal fire prevention.
Keep ignition sources away - Do not smoke.
The product forms flammable fumes when heated.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:** Keep containers tightly closed. Store in cool, dry conditions.

- **Requirements to be met by storerooms and containers:**

No special requirements.
Store in cool location.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:** Protect from humidity and keep away from water.

- **7.3 Specific end use(s)** No further relevant information available



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SECTION 8: Exposure controls / personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

• Components with critical values that require monitoring at the workplace:	
57-55-6 propane-1,2-diol (25-50%)	
WEL	Long-term value: 474* 10** mg/m ³ , 150* ppm *total vapour and particulates **particulates

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**

Keep away from food, beverages and fodder.

Do not eat, drink or smoke while working.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and 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.

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

- **Material of gloves:**

Butyl rubber, BR

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.

Change gloves if notice sign of disenchantment.

- **Eye protection:** Safety glasses recommended during refilling.

- **Body protection:**

Standard protective clothing. Chemical resistant safety-shoes or boots. If skin contact is possible, wear impenetrable protective clothing against this solvent.



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SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties

• General Information

• Appearance:

Form: Fluid

Colour: Violet

• Smell:

Product specific

• Odour threshold:

Not determined.

• pH-value at 20 °C:

7

• Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: > 100°C

• Flash point:

> 100°C

• Inflammability (solid, gaseous)

Not applicable.

• Ignition temperature:

Decomposition temperature: Not determined.

• Self-inflammability:

Product is not selfigniting.

• Danger of explosion:

Product is not potentially explosive

• Critical values for explosion:

Lower: 2,6 Vol %

Upper: (higher and lower level of 1,2-propanediol)

• Vapour pressure:

Not determined.

• Density at 20 °C

1.02 g/cm³

• 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.

• Viscosity:

dynamic: Not determined.

kinematic: Not determined.

• 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 oxidizing agents

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- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** strong oxidizing agents
- **10.6 Hazardous decomposition products:** Formation of carbon monoxide and carbon dioxide in case of fire.

SECTION 11: Toxicological information

• 11.1 Information on toxicological effects

• Acute toxicity:

• LD/LC50 values that are relevant for classification:

57-55-6 propane-1,2-diol

Oral	LD50	> 22000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

• Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** Slight irritant, but not sufficient to trigger an EC label
- **Sensitisation:** No sensitizing effect known.

• 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 we have to hand.

SECTION 12: Ecological information

• 12.1 Toxicity

• Aquatic toxicity:

57-55-6 propane-1,2-diol

EC 50 / 48 h	18800 mg/l (Mysidopsis bahia)
IC 50 / 72 h	24200 mg/l (Selenastrum capricornutum)
LC 50 / 96 h	40613 mg/l (Oncorhynchus mykiss)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Weitere ökologische Hinweise:**
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable..
- **12.6 Other adverse effects** No further relevant information available.



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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

A used product should be recycled or used in other contexts, otherwise be handed over to an appropriate disposal site.

- **Waste disposal key number:**

Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

- **Uncleaned packagings:** Disposal must be made according to official regulations.

- **Recommendation:**

Rented packaging: After optimal emptying, close immediately and return to the supplier without cleaning. Care should be taken that no other materials get into the packaging.

Other containers: After complete emptying and cleaning, send to be reconditioned or recycled.

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA** Void

- **14.2 UN proper shipping name**

- **ADR, ADN, IMDG, IATA** Void

- **14.3 Transport hazard class(es)**

- **ADR, 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.

- **Transport/Additional information:** Not dangerous according to the above specifications.

- **UN "Model Regulation":** -



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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture** No further relevant information available.
- **15.2 Chemical safety assessment:**

SECTION 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:**

AkoTec Produktionsgesellschaft
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- **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
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent