

**Safety data sheet in accordance with 2001/58/EC**  
**ANTIFROGEN SOL VP 1981**

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Substance key: SXR104094  
Version : 1 - 15 / EURevision Date: 19.02.2004  
Date of printing : 30.06.2008**1. Identification of the substance/preparation and company****Trade name****ANTIFROGEN SOL VP 1981****Use of the substance/preparation.**Industry sector : Functional Fluids  
Type of use : Product for solar installations**Identification of the company**

Clariant Produkte (Deutschland) GmbH

65926 Frankfurt am Main  
Telephone no. : +49 69 305 18000**Information about the substance/preparation**Div. Functional Chemicals/PRODUCT SAFETY  
++49(0)69-305-2092/15315/32251**Emergency telephone number** : +49 69 305 6418**2. Composition/information on ingredients****Chemical characterization**

Glykole und Inhibitoren in wässriger Lösung

**3. Hazards identification**

No particular hazards known.

**4. First aid measures****General information**Remove soiled or soaked clothing immediately  
Take affected person to fresh air.**After inhalation**

When inhaled remove to fresh air and seek medical aid.

**After contact with skin**

In case of contact with skin wash off immediately with plenty of water

**After contact with eyes**

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice

**After ingestion**

Summon a doctor immediately.

**5. Fire-fighting measures**

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Product itself is non-combustible; Fire extinguishing method of surrounding areas must be discussed.

**Special hazards from the substance itself, its combustion products or from its vapours**

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)

**Special protective equipment for firefighting**

Use self-contained breathing apparatus

**6. Accidental release measures****Personal precautions**

Wear suitable personal protective equipment.

**Environmental precautions**

Do not allow to enter drains or waterways

**Methods for cleaning up/taking up**

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust).  
Dispose of as prescribed

**7. Handling and storage****Advice on safe handling**

No special measures necessary if stored and handled as prescribed.

**Advice on protection against fire and explosion**

Observe the general rules of industrial fire protection

**Requirements for storage rooms and vessels**

Do not use zinc containers.

**8. Exposure controls/personal protection****General protective measures**

Do not inhale vapours

**Hygiene measures**

Keep away from foodstuffs and beverages.

**Respiratory protection :**

Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure  
Full mask to standard DIN EN 136  
Filter A (organic gases and vapours) to standard DIN EN 141  
The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume. Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national regulations.

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<b>Hand protection :</b>	For long-term exposure: Butyl rubber gloves. Minimum breakthrough time / gloves : 480 min Minimum thickness / gloves 0,7 mm  For short-term exposure (splash protection): Nitrile rubber gloves. Minimum breakthrough time / gloves : 30 min Minimum thickness / gloves 0,4 mm  These types of protective gloves are offered by various manufacturers. Please note the manufacturers´ detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.
<b>Eye protection :</b>	safety glasses

**9. Physical and chemical properties**

<b>Form :</b>	Liquid
<b>Colour :</b>	green
<b>Odour :</b>	slight, product specific
<b>Solidifying Point :</b>	-34 °C Method : DIN 51583
<b>Boiling temperature :</b>	approx. 107 °C ( 1.013 mbar) Method : ASTM D 1120
<b>Flash point :</b>	> 110 °C Method : DIN 51758 (closed cup)
<b>Ignition temperature :</b>	> 550 °C Method : DIN 51794
<b>Oxidizing properties :</b>	Not applicable
<b>Self-ignition temperature :</b>	Not applicable
<b>Lower explosion limit :</b>	not determined
<b>Upper explosion limit :</b>	not determined
<b>Evaporation rate :</b>	not determined
<b>Vapour pressure :</b>	approx. 20 mbar (20 °C) Method : Calculated by Syracuse.
<b>Density :</b>	approx. 1,07 g/cm <sup>3</sup> (20 °C) Method : DIN 51757
<b>Bulk density :</b>	Not applicable
<b>Vapour density in relation to air :</b>	not determined

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<b>Solubility in water :</b>	(20 °C) miscible
<b>Soluble in ... :</b>	fat not determined
<b>pH value :</b>	7,5 - 9 (20 °C) Method : DIN EN 1262 Determined in the undiluted form
<b>Octanol/water partition coefficient (log Pow) :</b>	not determined
<b>Viscosity (kinematic) :</b>	approx. 7 mm <sup>2</sup> /s ( 20 °C) Method : DIN 51562
<b>Combustion number :</b>	Not applicable

**10. Stability and reactivity**

**Thermal decomposition :** > 400 °C  
Method : DSC

**Hazardous reactions**

Reactions with acids.  
Incompatible with oxidizing materials.

**11. Toxicological information**

<b>Acute oral toxicity :</b>	not determined
<b>Acute inhalation toxicity :</b>	not determined
<b>Acute dermal toxicity :</b>	not determined
<b>Irritant effect on skin :</b>	not determined
<b>Irritant effect on eyes :</b>	not determined
<b>Sensitization :</b>	not determined
<b>Mutagenicity :</b>	not determined

**Remarks**

The product was classified on the basis of the calculation procedure of the Dangerous Preparations Directive (1999/45/EC).

**12. Ecological information**

<b>Biodegradability :</b>	90 % good degradability Method : Zahn-Wellens test
<b>Fish toxicity :</b>	LC50 1.400 mg/l (golden orfe)

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If handled correctly it causes no disturbance in treatment plants.  
By analogy with a product of similar composition

**13. Disposal considerations****Product**

In accordance with local authority regulations, take to special waste incineration plant

**14. Transport information**

<b>ADR</b>	not restricted
<b>ADNR</b>	not restricted
<b>RID</b>	not restricted
<b>IATA</b>	not restricted
<b>IMDG</b>	not restricted

**15. Regulatory information****Labelling in accordance with EC-Directives**

The product does not require a hazard warning label in accordance with EC Directives  
Classification according to the calculation procedure of the Dangerous Preparations Directive  
(1999/45/EC).

**16. Other information**

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method of use. We do not accept responsibility for any harm caused by the use of this information. In all cases, our general conditions of sale apply.