

Antifrogen SOL HT

Page 1(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

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

1.1. Product identifier

Trade name

Antifrogen SOL HT

Material number: 232512

Chemical nature: Mixture of higher boiling glycols with corrosion inhibitors

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

Relevant identified uses of the substance or mixture

Industry sector : Functional Fluids

Type of use : Heat transfer agents

1.3. Details of the supplier of the safety data sheet

Identification of the company

Clariant Produkte (Deutschland) GmbH

65926 Frankfurt am Main

Telephone no. : +49 69 305 18000

Information about the substance/mixture

BU Industrial & Consumer Specialties

Product Stewardship

e-mail: SDS.Europe@clariant.com

1.4. Emergency telephone number

00800-5121 5121

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

According to the present state of knowledge provided this product is handled correctly, there is no danger to humans or the environment

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Antifrogen SOL HT

Page 2(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

Remarks : No hazardous ingredients

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Remove/Take off immediately all contaminated clothing.
Get medical advice/ attention if you feel unwell.
- If inhaled : If inhaled, remove to fresh air.
Get medical advice/ attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty
of water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty
of water and seek medical advice.
- If swallowed : Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No symptoms known currently.
- Risks : No hazards known at this time.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Not combustible.
Use extinguishing measures that are appropriate to local
circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : In case of fires, hazardous combustion gases are formed:
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)

5.3 Advice for firefighters

- Special protective equipment for firefighters : Self-contained breathing apparatus

Antifrogen SOL HT

Page 3(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear suitable protective equipment.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

Information regarding Safe handling, see chapter 7., For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

Hygiene measures : Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Do not use zinc containers.

Further information on storage conditions : Keep containers tightly closed in a cool, well-ventilated place.
Handle and open container with care.

7.3 Specific end use(s)

Specific use(s) : No further recommendations.

Antifrogen SOL HT

Page 4(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Triethylene glycol CAS-No.: 112-27-6	Workers	Dermal	Long-term systemic effects	40 mg/kg bw/day
Remarks:	DNEL			
	Workers	Inhalation	Acute local effects	50 mg/m3
Remarks:	DNEL			
	General population	Dermal	Long-term systemic effects	20 mg/kg bw/day
Remarks:	DNEL			
	General population	Inhalation	Acute local effects	25 mg/m3
Remarks:	DNEL			
Reaction mass of 2,2'-(ethylenedioxy)diethanol and 3,6,9-trioxaundecane-1,11-diol	Workers	Inhalation	Long-term systemic effects	50 mg/m3
Remarks:	DNEL			

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Triethylene glycol CAS-No.: 112-27-6	Fresh water	10 mg/l
	Marine water	1 mg/l
	Fresh water sediment	46 mg/kg dry weight (d.w.)
	Marine sediment	4,6 mg/kg dry weight (d.w.)
	Soil	3,32 mg/kg dry weight (d.w.)
	Sewage treatment plant	10 mg/l
Reaction mass of 2,2'-(ethylenedioxy)diethanol and 3,6,9-trioxaundecane-1,11-diol	Fresh water	10 mg/l
	salt water	1 mg/l
	Water (intermittent release)	10 mg/l
	Fresh water sediment	20,9 mg/kg dry weight (d.w.)
	Soil	1,53 mg/kg dry weight (d.w.)
	Sewage treatment plant	199,5 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

Antifrogen SOL HT

Page 5(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

- Hand protection
- Break through time : 480 min
 - Glove thickness : 0,7 mm
 - Remarks : Long-term exposure Impervious butyl rubber gloves
-
- Break through time : 30 min
 - Glove thickness : 0,4 mm
 - Remarks : For short-term exposure (splash protection): Nitrile rubber gloves.
-
- Remarks : 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.
-
- 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.
-
- Protective measures : Observe the usual precautions for handling chemicals.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : Liquid
- Colour : light yellow
- Odour : slightly perceptible
- Odour Threshold : not tested.
- pH : approx. 10 (20 °C)
Method: DIN 19268
Determined in the undiluted form
- Solidification point : approx. -28 °C
Method: DIN 51583
- Freezing point : approx. -23 °C
Method: ASTM D 1177
- Boiling point : approx. 104 °C
Method: ASTM D 1120

Antifrogen SOL HT

Page 6(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

Flash point	:	does not flash
Evaporation rate	:	not tested.
Burning number	:	Not applicable
Upper explosion limit / upper flammability limit	:	not tested.
Lower explosion limit / Lower flammability limit	:	not tested.
Vapour pressure	:	< 0,1 kPa (20 °C) Method: Calculated by Syracuse. Information refers to the main component.
Relative vapour density	:	not tested.
Density	:	approx. 1,08 g/cm ³ (20 °C) Method: DIN 51757
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	soluble (20 °C)
Solubility in other solvents	:	not tested. Solvent: fat
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	approx. 420 °C Method: DIN 51794
Decomposition temperature	:	> 200 °C Method: DSC Measurement under nitrogen
Viscosity		
Viscosity, dynamic	:	approx. 8 mPa.s Method: calculated
Viscosity, kinematic	:	approx. 7,4 mm ² /s Method: DIN 51562
Explosive properties	:	Not explosive Method: Expert judgement
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Method: Expert judgement

Antifrogen SOL HT

Page 7(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

9.2 Other information

Metal corrosion rate	:	< 6,25 mm/a
Minimum ignition energy	:	not tested.
Particle size	:	Not applicable
Self-ignition	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3. "Possibility of hazardous reactions"

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Hazardous reactions : Reactions with acids., Incompatible with oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : not known

10.6 Hazardous decomposition products

When handled and stored appropriately, no dangerous decomposition products are known

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : Remarks: not tested.

Acute dermal toxicity : Remarks: not tested.

Skin corrosion/irritation

Product:

Result : No skin irritation
Remarks : Information refers to the main component.

Antifrogen SOL HT

Page 8(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

Serious eye damage/eye irritation

Product:

Result : No eye irritation
Remarks : Information refers to the main component.

Respiratory or skin sensitisation

Product:

Remarks : not tested.

Germ cell mutagenicity

Product:

Germ cell mutagenicity-
Assessment : No information available.

Carcinogenicity

Product:

Carcinogenicity -
Assessment : No information available.

Reproductive toxicity

Product:

Reproductive toxicity -
Assessment : No information available.

No information available.

STOT - single exposure

Product:

Remarks : not tested.

STOT - repeated exposure

Product:

Remarks : not tested.

Repeated dose toxicity

Product:

Remarks : not tested.

Further information

Product:

Remarks : The classification was made by the conventional (calculation)

Antifrogen SOL HT

Page 9(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

method of the CLP Regulation (EC) No 1272/2008.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 10 g/l
Exposure time: 96 h
Remarks: Information refers to the main component.

Toxicity to daphnia and other aquatic invertebrates : Remarks: not tested.

Toxicity to algae/aquatic plants : Remarks: not tested.

Toxicity to microorganisms : Remarks: not tested.

12.2 Persistence and degradability

Product:

Biodegradability : Biodegradation: 95 %
Exposure time: 14 d
Method: OECD Test Guideline 302B
Remarks: Information refers to the main component.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Environmental fate and pathways : no data available

Antifrogen SOL HT

Page 10(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

Additional ecological information : The classification was made by the conventional (calculation) method of the CLP Regulation (EC) No 1272/2008.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14: Transport information

Section 14.1. to 14.5.

ADR	not restricted
ADN	not restricted
RID	not restricted
IATA	not restricted
IMDG	not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code (International Bulk Chemicals Code)

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2 Chemical safety assessment

Chemical Safety Assessments (CSAs) are available for one or more of the component substances contained in this product.

SECTION 16: Other information

Full text of other abbreviations

Antifrogen SOL HT

Page 11(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : Observe national and local legal requirements

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. Nothing included in this information waives any of Clariant's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006



Antifrogen SOL HT

Page 12(12)

Substance key: 000000324944

Revision Date: 15.05.2019

Version : 3 - 6 / EU

Date of printing : 17.06.2020