

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

### 1.1. Product identifier

**Trade name**

**ANTIFROGEN N WATER-MIXTURE 39%**

**Material number:** 112063

### 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 : Brine for refrigeration

Exposure scenarios: see section 15.2.

### 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**

Corp Product Stewardship

e-mail: MSDS.CorpPS\_BU\_ICCS@clariant.com

### 1.4. Emergency telephone number

00800-5121 5121 (24 h)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according EC Directive (67/548/EEC or 1999/45/EC, as amended)

Category of danger/Category	Hazard symbol	R - phrases
	Harmful	Harmful if swallowed.

### 2.2. Label elements

**Labelling in accordance with EC-Directives (67/548/EEC or 1999/45/EC, as amended)**

hazard warning labelling compulsory, Classification according to the calculation procedure of the Dangerous Preparations Directive (1999/45/EC).

Symbols/Indications of danger



Harmful

R phrases

22 Harmful if swallowed.

S phrases

2 Keep out of the reach of children.  
24/25 Avoid contact with skin and eyes.

### 2.3. Other hazards

No additional hazards are known except those derived from the labelling.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Monoethylene glycol (1,2-ethane diol) and corrosion inhibitors in aqueous solution (39% active)

#### Hazardous ingredients

##### Ethenediol

Concentration : 38 - 42 %  
CAS number : 107-21-1  
EC number: 203-473-3  
Index Number 603-027-00-1

REACH - Registration number according to article 20(3): 01-2119456816-28, 01-2119456816-28-0000, 01-2119456816-28-0003, 01-2119456816-28-XXXX

Classification hazard substance EC

Xn	Harmful	R 22
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GHS classification EC

Specific target organ toxicity - Repeated exposure	Category 2	H373
Acute toxicity	Category 4	H302

The text of the R-phrases is shown in section 16.

The text of the H-phrases is shown in section 16.

## SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

Remove soiled or soaked clothing immediately

##### 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.

#### 4.2. Most important symptoms and effects, both acute and delayed

##### Symptoms

No symptoms known currently.

##### Hazards

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

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

#### 5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)

#### 5.3. Advice for firefighters

##### Special protective equipment for firefighting

Use self-contained breathing apparatus

##### Further information

Wear protective equipment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

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Ensure adequate ventilation.  
Wear suitable personal protective equipment.

**6.2. Environmental precautions**

Do not allow to enter drains or waterways

**6.3. Methods and material for containment and cleaning up**

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

**6.4. Reference to other sections**

**Additional information**

Information regarding Safe handling, see chapter 7.  
Information regarding personal protective measures see, chapter 8.  
Information regarding Waste Disposal, see chapter 13.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Open and handle container with care.  
Ensure adequate ventilation.

**Hygiene measures**

Keep away from foodstuffs and beverages.

**Advice on protection against fire and explosion**

The product is not combustible

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

**Further information on storage conditions**

Keep container tightly closed in a cool, well-ventilated place, open and handle carefully.

**Storage stability**

Storage time: > 24 months

**7.3. Specific end use(s)**

No further recommendations.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limit values**

ethylene glycol  
EC number: 203-473-3  
CAS number : 107-21-1

Regulatory basis / Regulatory list	Revision	Type of value	Values	Remarks
Europe. Commission Directive	2000-06-16	Limit Value -	52 mg/m3	

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2000/39/EC establishing a first list of indicative occupational exposure limit values EU. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.		eight hours	20 ppm	
Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values EU. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.	2000-06-16	Short term exposure limit	104 mg/m <sup>3</sup> 40 ppm	

**DNEL/DMEL values**

Ethanediol  
EC number: 203-473-3  
CAS number : 107-21-1

Route of exposure	Personnel	Exposure time/Effect	Value	Remarks
Dermal	Worker	Long term/systemic effects	106 mg/kg bw/day	DNEL
Inhalation	Worker	Long term/local effects	35 mg/m <sup>3</sup>	DNEL
Dermal	General population	Long term/systemic effects	53 mg/kg bw/day	DNEL
Inhalation	General population	Long term/local effects	7 mg/m <sup>3</sup>	

**PNEC values**

Ethanediol  
EC number: 203-473-3  
CAS number : 107-21-1

Environmental compartment	Personnel/Exposure time/Effect	Value
Water (fresh water)		10 mg/l
Water (sea water)		1 mg/l
Water (intermittent release)		10 mg/l
Sediment (fresh water)		20,9 mg/kg sediment dw
Soil		1,53 mg/kg soil dw
STP		199,5 mg/l

**8.2. Exposure controls**

**General protective measures**

Do not inhale vapours

<b>Respiratory protection :</b>	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.
<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>	Depending on the risk, wear sufficient eye protection (safety glasses with side protection or goggles, and if necessary, face shield.)

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Form :</b>	Liquid
<b>Particle size :</b>	Not applicable
<b>Colour :</b>	light yellow
<b>Odour :</b>	slightly perceptible
<b>Odour threshold :</b>	not tested.
<b>pH value :</b>	approx. 8 (20 °C, 100 g/l) Method : DIN 19268
<b>Melting point :</b>	-26 °C Method : DIN 51583
<b>Boiling point :</b>	106 °C ( 1.013 hPa) Method : ASTM D 1120
<b>Flash point :</b>	Method : ASTM D6450 (closed cup) Not flammable (water-based)
<b>Evaporation rate :</b>	not tested.
<b>Lower explosion limit :</b>	not tested.

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<b>Upper explosive limit :</b>	not tested.
<b>Combustion number :</b>	Not applicable
<b>Minimum ignition energy :</b>	not tested.
<b>Vapour pressure :</b>	< 0,01 kPa (20 °C) Method : Calculated by Syracuse.
<b>Vapour density relative to air :</b>	not tested.
<b>Solubility in water :</b>	(20 °C) miscible in all proportions
<b>Soluble in ... :</b>	fat not tested.
<b>Octanol/water partition coefficient (log Pow) :</b>	not tested.
<b>Ignition temperature :</b>	Method : DIN 51794 Not applicable for Liquids with Flash Point > 70 °C.
<b>Self-ignition temperature :</b>	Not applicable
<b>Thermal decomposition :</b>	> 250 °C Method : DSC Measurement under nitrogen No decomposition upto 250 °C.
<b>Viscosity (dynamic) :</b>	3,05 mPa.s (20 °C)
<b>Viscosity (kinematic) :</b>	2,89 mm <sup>2</sup> /s ( 20 °C) Method : DIN 51562
<b>Explosive properties :</b>	Explosive according to EU supply regulations : no data
<b>Oxidizing properties :</b>	Not applicable

**9.2. Other information**

<b>Density :</b>	1,0542 g/cm <sup>3</sup> (20 °C) Method : DIN 51757
<b>Bulk density :</b>	Not applicable
<b>Surface tension :</b>	Not applicable

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

See section 10.3. "Possibility of hazardous reactions"

**10.2. Chemical stability**

Under normal conditions the product is stable.

**10.3. Possibility of hazardous reactions**

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Incompatible with oxidizing materials.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

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**

**Information related to the product itself:**

**Acute oral toxicity :** not tested.

**Acute dermal toxicity :** not tested.

**Acute inhalation toxicity :** not tested.

**Irritant effect on skin :** not tested.

**Irritant effect on eyes :** not tested.

**Sensitization :** not tested.

**Repeated dose toxicity:** not tested.

**Assessment of mutagenicity :** not tested.

**Assessment of carcinogenicity :** not tested.

**Assessment of toxicity to reproduction :** not tested.

**Assessment of teratogenicity :** not tested.

**Specific target organ toxicity (STOT) - single exposure :** not tested.

**Specific target organ toxicity (STOT) - repeated exposure :** not tested.

**Remarks**

There is a possibility of kidney damage

Poisoning affects the central nervous system

The data on toxicology refer to the active ingredient.

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

**Information related to the component: Ethanediol**

**Acute oral toxicity :** LD50 4.700 mg/kg (rat)



Acute toxicity estimate 500 mg/kg  
Method : Converted acute toxicity point estimate  
Source : Acute toxicity point estimate based on EU GHS  
classification data

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Information related to the product itself:

**Fish toxicity :** LC0 1.000 mg/l (golden orfe)  
By analogy with a similar product.  
LL50 > 100 mg/l (96 h, Zebra fish (Danio rerio))  
Method : OECD 203  
By analogy with a similar product.

**Daphnia toxicity :** not tested.

**Algae toxicity :** not tested.

**Bacteria toxicity :** not tested.

### 12.2. Persistence and degradability

#### Information related to the product itself:

**Biodegradability :** 90 %  
good degradability  
Method : Zahn-Wellens test

### 12.3. Bioaccumulative potential

#### Information related to the product itself:

**Bioaccumulation:** not tested.

### 12.4. Mobility in soil

#### Information related to the product itself:

**Transport and distribution  
between environmental  
compartments :** not tested.

### 12.5. Results of PBT and vPvB assessment

#### Information related to the product itself:

No data available.

### 12.6. Other adverse effects

#### Information related to the product itself:

**Additional ecotoxicological remarks**

If handled correctly it causes no disturbance in treatment plants.  
The ecological data given are for the undiluted product.  
The product was classified according to the calculation method of the EU Dangerous Preparations Directive.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Product**

Dispose of in accordance with local authority regulations

**Uncleaned packaging**

Untampered packaging may be reused  
Packaging that cannot be cleaned should be disposed of as product waste

**SECTION 14: Transport information**

**Section 14.1. to 14.5.**

<b>ADR</b>	not restricted
<b>ADN</b>	not restricted
<b>RID</b>	not restricted
<b>IATA</b>	not restricted
<b>IMDG</b>	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.

**Exposure scenarios - links**

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Please select the specified addresses from the internet in order to see the exposure scenarios.

URL	Short title
<a href="https://reachdialogsystem.clariant.com/ESDocs/EXS000005.pdf">https://reachdialogsystem.clariant.com/ESDocs/EXS000005.pdf</a>	Monoethylene glycol - all exposure scenarios

**SECTION 16: Other information**

Observe national and local legal requirements

**Text of the R-phrases assigned to the ingredients/components mentioned in section 3 :**

22 Harmful if swallowed.

**List of the text of the hazard statements mentioned section 3 (H-phrases) :**

H302 Harmful if swallowed.

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

**Legend**

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
AOX	Adsorbable organic bound halogens
CAS	Chemical Abstracts Service
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	Non Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative, Toxic
PEC	Predicted Environmental Concentration
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	International Rule for Transport of Dangerous Substances by Railway
SVHC	Substances of Very High Concern
vPvB	very Persistent and very Bioaccumulative

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm<sup>3</sup>" means "one point three five g/cm<sup>3</sup>").

# Safety Data Sheet in accordance with Regulation (EU) No.453/2010

**CLARIANT** 

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