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

1.1 Product identifier

Trade name/designation Antifrogen® L

Art-Nr(n). 1610

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

Use of the substance/mixture
Cooling liquid brine.
Functional fluid.

1.3 Details of the supplier of the safety data sheet

Supplier
GHC Gerling, Holz & Co. Handels GmbH
Ruhrstraße 113
D-22761 Hamburg
Telephone +49 40 853 123 0
E-mail hamburg@ghc.de
Website www.ghc.com

Department responsible for information:
GHC Gerling, Holz & Co. Handels GmbH
Telephone +49 40 853 123 0

E-mail (competent person):
msds@ghc.de

1.4 Emergency telephone number

EN: Poison Information Center Mainz +49 6131 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Remark
The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2 Label elements

No data available

2.3 Other hazards

Other adverse effects
The substance/mixture does not contain components identified as having endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

Results of PBT and vPvB assessment
The substance/mixture does not contain components meeting the PBT/vPvB criteria of the Reach Regulation, Annex XIII, at levels of 0.1% or higher.

Endocrine disrupting properties

Effective dose	Method,Evaluation	Source, Remark
		See section 2.3

* SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Hazardous ingredients

CAS No	EC No	Index No	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
57-55-6	200-338-0		Propane-1,2-diol	> 90 weight-%		ATE(oral): 22000 mg/kg ATE(dermal): > 2000 mg/kg ATE(inhalation vapour): > 100000 ppm
29385-43-1	249-596-6		methyl-1H-benzotriazole	≥ 0.1 < 0.25 weight-%	Acute Tox. 4; H302 Repr. 2; H361d Aquatic Chronic 2; H411	ATE(oral): approx. 720 mg/kg ATE(dermal): > 2000 mg/kg

REACH No.	Substance name
01-2119456809-23	Propane-1,2-diol
01-2119979081-35	methyl-1H-benzotriazole

* **Remark**
Mono-propylene glycol (Propane-1,2-diol) with corrosion inhibitors.
Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated, saturated clothing immediately.

Following inhalation
Remove casualty to fresh air and keep warm and at rest.
In the event of symptoms refer for medical treatment.

Following skin contact
After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.

After eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical assistance.

Following ingestion
Do NOT induce vomiting.
Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
The following symptoms may occur in case of strong exposition:
Eye Irritation
Gastrointestinal complaints

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Extinguishing powder
alcohol resistant foam
Water spray jet
Carbon dioxide (CO2)

Unsuitable extinguishing media
Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
In case of fire formation of dangerous gases possible.
Nitrogen oxides (NOx)
Carbon monoxide
Carbon dioxide (CO2)

5.3 Advice for firefighters

Special protective equipment for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information
Use water spray jet to protect personnel and to cool endangered containers.
Exposure to fire may cause rupture / explosion of the containers.
Dispose of fire residues and contaminated extinguishing water in accordance with local, official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Use personal protection equipment.
Leave the danger area.

For emergency responders
Personal protection by wearing close-fitting protective clothing and breathing apparatus.
Remove persons to safety.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil.
Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

For containment
Prevent the liquid from spreading over a wide area (set up barriers, cover sewage systems).

For cleaning up
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

Disposal: see section 13
Personal protection equipment: see section 8

* SECTION 7: Handling and storage

* 7.1 Precautions for safe handling

*

Protective measures
Use only in well-ventilated areas.
Usual measures for fire prevention.
If used properly, no special measures are required.

Advices on general occupational hygiene
When using do not eat, drink, smoke, sniff.
Wash hands before breaks and after work.
Remove contaminated clothing and protective equipment before entering eating areas.

* 7.2 Conditions for safe storage, including any incompatibilities

*

Requirements for storage rooms and vessels
All regulations and local requirements for the storage of containers have to be respected.
Keep container tightly closed and in a well-ventilated place.
Only use containers specifically approved for the substance/product.

Materials to avoid
Do not store together with explosives.
Do not store with gases.
Do not store together with pyrophoric and self-heating substances.
Do not store together with oxidizing liquids or oxidizing solids.
Do not store together with infectious substances.
Do not store together with radioactive material.
Do not store together with food or feed.

7.3 Specific end use(s)

Recommendation
See section 1.2
An exposure scenario is not required.

* SECTION 8: Exposure controls/personal protection

* 8.1 Control parameters

*

Occupational exposure limit values

CAS No	EC No	Substance name	occupational exposure limit value
57-55-6		Propane-1,2-diol, particulates	10 [mg/m³] (IE)
57-55-6		Propane-1,2-diol, total vapour and particulates	150 [ml/m³(ppm)] 470 [mg/m³] (IE)

DNEL worker

CAS No	Substance name	DNEL value	DNEL type	Remark
57-55-6	Propane-1,2-diol	10 mg/m³	long-term inhalative (local)	Assessment factor 9, repeated dose toxicity.
57-55-6	Propane-1,2-diol	168 mg/m³	long-term inhalative (systemic)	Assessment factor 3, repeated dose toxicity.
29385-43-1	methyl-1H-benzotriazole	0.3 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 300, repeated dose toxicity.
29385-43-1	methyl-1H-benzotriazole	21.2 mg/m³	long-term inhalative (systemic)	Assessment factor 75, repeated dose toxicity.

DNEL Consumer

CAS No	Substance name	DNEL value	DNEL type	Remark
57-55-6	Propane-1,2-diol	10 mg/m³	long-term inhalative (local)	Assessment factor 15, repeated dose toxicity.
57-55-6	Propane-1,2-diol	50 mg/m³	long-term inhalative (systemic)	Assessment factor 5, repeated dose toxicity.
29385-43-1	methyl-1H-benzotriazole	0.01 mg/kg bw/day	Long-term – oral, systemic effects	Assessment factor 3000, repeated dose toxicity.

CAS No	Substance name	DNEL value	DNEL type	Remark
29385-43-1	methyl-1H-benzotriazole	0.01 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 3000, repeated dose toxicity.
29385-43-1	methyl-1H-benzotriazole	350 µg/m³	long-term inhalative (systemic)	Assessment factor 750, repeated dose toxicity.

PNEC

CAS No	Substance name	PNEC Value	PNEC type	Remark
57-55-6	Propane-1,2-diol	26 mg/L	aquatic, marine water	Assessment factor 500
57-55-6	Propane-1,2-diol	50 mg/kg dw	soil	
57-55-6	Propane-1,2-diol	57.2 mg/kg dw	sediment, marine water	
57-55-6	Propane-1,2-diol	183 mg/L	aquatic, intermittent release	
57-55-6	Propane-1,2-diol	260 mg/L	aquatic, freshwater	Assessment factor 50, assessment factor.
57-55-6	Propane-1,2-diol	572 mg/kg dw	sediment, freshwater	
57-55-6	Propane-1,2-diol	20000 mg/L	sewage treatment plant (STP)	Assessment factor 1
29385-43-1	methyl-1H-benzotriazole	0.292 mg/kg dw	sediment, marine water	Assessment factor 10
29385-43-1	methyl-1H-benzotriazole	0.008 mg/L	aquatic, freshwater	Assessment factor 50, assessment factor.
29385-43-1	methyl-1H-benzotriazole	0.086 mg/L	aquatic, intermittent release	Assessment factor 5, assessment factor.
29385-43-1	methyl-1H-benzotriazole	0.117 mg/kg dw	sediment, freshwater	Assessment factor 10
29385-43-1	methyl-1H-benzotriazole	20 µg/L	aquatic, marine water	Assessment factor 500, assessment factor.
29385-43-1	methyl-1H-benzotriazole	18.7 µg/kg	soil	Assessment factor 10
29385-43-1	methyl-1H-benzotriazole	39.4 mg/L	sewage treatment plant (STP)	Assessment factor 10, assessment factor.

8.2 Exposure controls

Personal protection equipment

Eye/face protection
Protective goggles according to EN 166, in case of increased risk add protective face shield.

Hand protection
Safety gloves according to EN 374:
Glove material specification [make/type, thickness, permeation time/life]: IIR, >= 0,7 mm, > 480 min

Body protection:
Safety shoes with steel toecap.
Body covering work clothing or chemical resistant suit at increased risk.

Respiratory protection
Respiratory protection necessary at:
high concentrations
Suitable respiratory protection apparatus:
Short term: filter apparatus, filter A

Environmental exposure controls

Remark
Prevent release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
blue

Odour
perceptible

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			not determined
Melting point/freezing point	approx. -58 °C	DIN 51583	
Boiling point or initial boiling point and boiling range	approx. 155 °C pressure 1013 hPa	ASTM D1120	
flammability			none
Lower and upper explosion limit	Upper explosion limit 12.6 Vol-%		Information concerns main component.
Lower and upper explosion limit	Lower explosion limit 2.6 Vol-%		Information concerns main component.
Flash point	105 °C	ASTM D6450 (closed cup)	
Auto-ignition temperature	> 450 °C	DIN 51794	
Decomposition temperature	> 250 °C	DSC	
pH	in delivery state approx. 9 (20°C) Concentration 300 g/L	DIN 19268	aqueous solution
Viscosity	kinematic approx. 59 mm²/s (20°C)	DIN 51562	
Solubility(ies)	Water solubility (20°C)		miscible
Partition coefficient n-octanol/water (log value)			not applicable
Vapour pressure	< 0.1 hPa (20°C)	calculated	
Density and/or relative density	Density 1.043 g/cm³ (20°C)	DIN 51757	
Relative vapour density			not determined
particle characteristics			not applicable

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

See section "Possibility of hazardous reactions".

10.2 Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

Reactions with strong alkalies.
Reactions with oxidising agents.

10.4 Conditions to avoid

Heat sources / heat - risk of bursting.
Ignition sources, open flames, glowing metal surfaces, etc.

10.5 Incompatible materials

Alkali (lye)
Oxidising agent

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Animal data

	Effective dose	Method,Evaluation	Source, Remark
Acute oral toxicity	CAS No57-55-6 Propane-1,2-diol LD50: 22000 mg/kg Species Rat		
	CAS No29385-43-1 methyl-1H-benzotriazole LD50: approx. 720 mg/kg Species Rat	OECD 401	
Acute dermal toxicity	CAS No57-55-6 Propane-1,2-diol LD50: > 2000 mg/kg Species Rabbit		
	CAS No29385-43-1 methyl-1H-benzotriazole LD50: > 2000 mg/kg Species Rabbit	OECD 402	
Acute inhalation toxicity	CAS No57-55-6 Propane-1,2-diol Acute inhalation toxicity (vapour) LC50: > 100000 ppm Species Rabbit Exposure time 2 h		

Assessment/classification
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Animal data

Result / Evaluation	Method	Source, Remark
non-irritant. Species Rabbit	OECD 404	Information concerns main component.

Assessment/classification
Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Animal data

Result / Evaluation	Method	Source, Remark
non-irritant. Species Rabbit	OECD 405	Information concerns main component.

Assessment/classification
Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract

Assessment/classification
Study scientifically not necessary.

Skin sensitisation

Animal data

Result / Evaluation	Dose / Concentration	Method	Source, Remark
not sensitising.	Species Guinea pig	OECD 406	Information concerns main component.

Assessment/classification
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

	Value	Method	Result / Evaluation	Remark
In vitro mutagenicity/genotoxicity			negative	Information concerns main component.
In vivo mutagenicity/genotoxicity			negative	

Assessment/classification
Based on available data, the classification criteria are not met.

Carcinogenicity

Animal data

	Value	Method	Result / Evaluation	Remark
Carcinogenicity	oral NOAEL(C): 1700- 2100 mg/kg Species Rat Exposure duration 2 a			Information concerns main component.

Assessment/classification
Based on available data, the classification criteria are not met.

Reproductive toxicity

Animal data

	Value	Method	Result / Evaluation	Remark
Reproductive toxicity	NOAEL(C): 10100 mg/kg Species Mouse			Information concerns main component.

Assessment/classification
Based on available data, the classification criteria are not met.

STOT-single exposure

STOT SE 1 and 2

Assessment/classification
Based on available data, the classification criteria are not met.

STOT-repeated exposure

Assessment/classification
Based on available data, the classification criteria are not met.

Aspiration hazard

Remark
Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Other information

The product has not been tested. The information is derived from the properties of the individual components.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	LC50: 40613 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 96 h		Information concerns main component.
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	LC50 > 18340 mg/L Species Ceriodaphnia spec Test duration 48 h	OECD 202	Information concerns main component.
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	EC50 24200 mg/L Species Pseudokirchneriella subcapitata Test duration 72 h	OECD 201	Information concerns main component.
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	NOEC > 20000 mg/L Species Pseudomonas putida Test duration 18 h		Information concerns main component.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate 98.3 % Test duration 28 d	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	CAS No57-55-6 Propane-1,2-diol
Biodegradation	Degradation rate 4 % Test duration 28 d	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	CAS No29385-43-1 methyl-1H-benzotriazole

Assessment/classification
Readily biodegradable (according to OECD criteria).

12.3 Bioaccumulative potential

	Value	Method	Source, Remark
Bioconcentration factor (BCF)	Bioconcentration factor (BCF) 0.09	calculated	CAS No57-55-6 Propane-1,2-diol
Bioconcentration factor (BCF)	Bioconcentration factor (BCF) 2.4	calculated	CAS No29385-43-1 methyl-1H-benzotriazole

Assessment/classification
Based on the n-octanol/water partition coefficients of the individual components of the mixture, accumulation in organisms is not expected.

12.4 Mobility in soil

	Value	Distribution	Transport type	Method	Remark
Half-life time in soil	CAS No57-55-6 Propane-1,2-diol 2.9				KOC value
Half-life time in soil	CAS No29385-43-1 methyl-1H-benzotriazole 110				KOC value

12.5 Results of PBT and vPvB assessment

The substance/mixture does not contain components meeting the PBT/vPvB criteria of the Reach Regulation, Annex XIII, at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

	Effective dose	Method,Evaluation	Source, Remark
Endocrine disrupting properties			See section 2.3

12.7 Other adverse effects

Additional ecotoxicological information

Additional information
The product has not been tested. The data are derived from the individual components of the mixture.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
160114 *	antifreeze fluids containing hazardous substances

Appropriate disposal / Product
Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Prevent release to the environment. No disposal via the sewage.
Disposal according to local regulations.

Appropriate disposal / Package
Disposal according to local regulations.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	-	-	-

14.6 Special precautions for user

The protective measures listed in Sections 6, 7 and 8 of the Safety Data Sheet have to be considered.

14.7 Maritime transport in bulk according to IMO instruments

No carriage in bulk.

Land transport (ADR/RID)

Remark
Not classified for this transport carrier.

Sea transport (IMDG)

Remark
No hazardous material as defined by the prescriptions.

Air transport (ICAO-TI / IATA-DGR)

Remark
No hazardous material as defined by the prescriptions.

SECTION 15: Regulatory information

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

Other regulations (EU)

To follow:
National and local regulations concerning chemicals shall be observed.

15.2 Chemical Safety Assessment

National regulations

Chemical safety assessments for substances in this mixture were carried out.

SECTION 16: Other information

Key literature references and sources for data
Information from our suppliers and data from the "GESTIS Substances Database" and the "Registered Substances" database of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
The mixture was classified by the manufacturer.

Additional information
® Clariant International Ltd.'s registered trademark.
The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Relevant H- and EUH-phrases (Number and full text)

H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Indication of changes
* Data changed compared with the previous version