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

1.1. Product identifier

Name of product

Coolex® L - water mixture 25 - 50 %
Art-Nr(n).: 1692-25 - 1692-50

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

Recommended intended purpose(s)
Cooling liquid brine.
Functional fluid.

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

GHC Gerling, Holz & Co. Handels GmbH
Ruhrstraße 113, D-22761 Hamburg
Phone +49 40 853 123-0, Fax +49 40 853 123-66
E-Mail hamburg@ghc.de
Internet www.ghc.com

Advice

GHC Gerling, Holz & Co. Handels GmbH
Phone +49 40 853 123-0
Fax +49 40 853 123-66
E-mail (competent person):
msds@ghc.de

1.4. Emergency telephone number

Emergency advice

Giftinformationszentrum (Poison Control Centre) Mainz
Phone +49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Additional hints
This mixture is not classified as hazardous according to Regulation (EC) 1272/2008 [GHS].

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Signal word
no

2.3. Other hazards

Information pertaining to special dangers for human and environment
no

! **Results of PBT and vPvB assessment**
The substances in this mixture do not meet the PBT/vPvB criteria of REACH, annex XIII.

SECTION 3: Composition/ information on ingredients

3.1. Substances
not applicable

3.2. Mixtures
Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
57-55-6	**200-338-0**	**Propane-1,2-diol**	**<= 50**	

REACH

CAS No	Name	REACH registration number
57-55-6	Propane-1,2-diol	01-2119456809-23

Additional advice
Aqueous solution of mono propylene glycol (propane-1,2-diol) with corrosion inhibitors.

! SECTION 4: First aid measures

4.1. Description of first aid measures
General information
Remove contaminated soaked clothing immediately.
Adhere to personal protective measures when giving first aid.

In case of inhalation
Remove the casualty into fresh air and keep him immobile.
In the event of symptoms refer for medical treatment.

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

! **In case of eye contact**
Eye rinsing with water carefully while protecting unhurt eye.
Call for a doctor immediately.
Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion
Call for a doctor immediately.
Rinse out mouth and give plenty of water to drink.

4.2. Most important symptoms and effects, both acute and delayed
! **Physician's information / possible symptoms**
no

Physician's information / possible dangers
no

4.3. Indication of any immediate medical attention and special treatment needed
Treatment (Advice to doctor)
Treat symptoms.

! SECTION 5: Firefighting measures

5.1. Extinguishing media

! **Suitable extinguishing media**
Product does not burn, fire-extinguishing activities according to surrounding.
Alcohol-resistant foam
Dry powder
Carbon dioxide
Water spray jet

! **Unsuitable extinguishing media**
Full water jet

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Special protective equipment for fire-fighters
Use breathing apparatus with independent air supply (isolated).
Wear full protective clothing.

! **Additional information**
Cool endangered containers with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

! SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

! **For non-emergency personnel**
Evacuate area.
Keep people away and stay on the upwind side.

! **For emergency responders**
Ensure adequate ventilation.
Remove persons to safety.
Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).
Clean contaminated objects and floor thoroughly under consideration of environment regulations.
Flush away residues with water.
Dispose of contaminated material in accordance with regulations.

6.4. Reference to other sections

Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

! SECTION 7: Handling and storage

7.1. Precautions for safe handling

! **Advice on safe handling**
Avoid formation of aerosols.
Use only in thoroughly ventilated areas.
No special measures necessary if used correctly.

General protective measures
Do not inhale vapours.
Do not inhale aerosols

! **Hygiene measures**
At work do not eat, drink and smoke.
Wash hands before breaks and after work.

Advice on protection against fire and explosion
The product is not combustible.
Pay attention to general rules of internal fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

! **Requirements for storage rooms and vessels**
Keep in closed original container.
Ventilate store-rooms thoroughly.
All regulations and local requirements for the storage of containers have to be respected.

Advice on storage compatibility
Do not store with alkalies.
Do not store together with animal feedstuffs.
Do not store together with explosives.
Do not store together with infectious substances.
Do not store together with radioactive material.
Do not store together with food.

! **Further information on storage conditions**
Store only in closed original container at cool and aired place.

7.3. Specific end use(s)

Recommendation(s) for intended use
No further recommendations.

! SECTION 8: Exposure controls/personal protection

8.1. Control parameters

! **Ingredients with occupational exposure limits to be monitored**

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
57-55-6	Propane-1,2-diol	WEL, 8 hours	474	150	EH40, UK

DNEL-/PNEC-values
DNEL worker

CAS No	Substance name	Value	Code	Remark
57-55-6	Propane-1,2-diol	168 mg/m3	DNEL long-term inhalative (systemic)	
		10 mg/m3	DNEL long-term inhalative (local)	

DNEL Consumer

CAS No	Substance name	Value	Code	Remark
57-55-6	Propane-1,2-diol	50 mg/m3	DNEL long-term inhalative (systemic)	
		10 mg/m3	DNEL long-term inhalative (local)	
		213 mg/m3	DNEL long-term dermal (systemic)	
		85 mg/m3	DNEL long-term oral (repeated)	

PNEC

CAS No	Substance name	Value	Code	Remark
57-55-6	Propane-1,2-diol	183 mg/l	PNEC aquatic, intermittent release	Assessment factor 50
		57,2 mg/kg dw	PNEC sediment, marine water	
		572 mg/kg dw	PNEC sediment, freshwater	
		260 mg/l	PNEC aquatic, freshwater	Assessment factor 50
		26 mg/l	PNEC aquatic, marine water	Assessment factor 500
		20000 mg/l	PNEC sewage treatment plant (STP)	Assessment factor 1
		50 mg/kg dw	PNEC soil	

8.2. Exposure controls

Respiratory protection

In case of insufficient ventilation or long-term effect use breathing apparatus.
Breathing apparatus in the event of aerosol or mist formation.
Keep self contained breathing apparatus readily available for emergency use.
Full mask, filter A
Respiratory protection complying with EN 136.

! **Hand protection**

Chemical-resistant protective gloves complying with EN 374.
Glove material specification [make/type, thickness, permeation time/life]: NBR; 0,4 mm; >= 30 min
Glove material specification [make/type, thickness, permeation time/life]: IIR, >= 0,7 mm, > 480 min

! **Eye protection**

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

! **Other protection measures**

Safety shoes with steel toe.
Body covering work clothing, or chemical resistant suit at increased risk.

! SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
liquid

Colour
green

Odour
perceptible

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	ca. 8	20 °C		DIN 51369	Wurde 1:2 in Wasser bestimmt.
boiling point	ca. 102 - 106 °C		1013 hPa	ASTM D 1120	
melting point	ca. -32 - -10 °C			ASTM D 1177	
Flash point	no			DIN 51758 (closed up)	
Vapourisation rate	not determined				
Flammable (solid)	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	not applicable			DIN 51794	
Self ignition temperature	no				
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	< 0,1 hPa	20 °C		calculated	
Relative density	ca. 1,021 - 1,039 g/cm3	20 °C		DIN 51757	20 - 50 %
Bulk density	not applicable				
Vapour density	not determined				

	Value	Temperature	at	Method	Remark
Solubility in water		20 °C			miscible
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not applicable				
Decomposition temperature	> 200 °C			DSC	Determination in a nitrogen atmosphere
Viscosity kinematic	ca. 2,4 - 6, 3 mm2/s	20 °C		DIN 51562	20 - 50 %
Viscosity dynamic	2,5 - 6,5 mPa*s	20 °C		Calculated	25 - 50 %

Oxidising properties
no

Explosive properties
no

9.2. Other information
no

! SECTION 10: Stability and reactivity

10.1. Reactivity
See section "Possibility of hazardous reactions".

10.2. Chemical stability
Stable under recommended conditions of use and storage (see section 7).

10.3. Possibility of hazardous reactions
Reactions with oxidising agents.

10.4. Conditions to avoid
Heat sources / heat - risk of bursting.

10.5. Incompatible materials
! **Substances to avoid**
Oxidising agent

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

Thermal decomposition

Method DSC

Remark No decomposition below 200°C.

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	22000 mg/kg	rat (male / female)		Information concerns to Propane-1,2-diol.
LD50 acute dermal	> 2000 mg/kg	rabbit		Information concerns to Propane-1,2-diol.
LC50 acute inhalation	> 317042 mg/m3 (2 h)	rabbit.	Aerosol	Information concerns to Propane-1,2-diol.
Skin irritation	non-irritant	rabbit	OECD 404	Information concerns to Propane-1,2-diol.
Eye irritation	low irritant - no labeling duty	rabbit eye	OECD 405	Information concerns to Propane-1,2-diol.
Skin sensitization	non-sensitizing	Guinea pig	OECD 406	Information concerns to Propane-1,2-diol.
Sensitization respiratory system	Study scientifically not necessary.			

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Subchronic Toxicity	NOAEC 1000 - 2200 mg/kg (90 d) Inhalation Information concerns to Propane-1,2-diol.	Rat (male / female)	6 h/d, 5 d/w	No effects of toxicological significance.
Chronic Toxicity	NOAEL 1700 - 2100 mg/kg (2 a) Chronic oral toxicity (feed) Information concerns to Propane-1,2-diol.	Rat (male / female)		No effects of toxicological significance.
Mutagenicity	Information concerns to Propane-1,2-diol.			No experimental information on genotoxicity in vitro and in vivo available.

	Value	Species	Method	Validation
Reproduction-Toxicity	NOAEL 10100 mg/kg Oral Drinking water - Information concerns to Propane-1,2-diol.	Mouse		No indications of toxic effects were observed in reproduction studies in animals.
Carcinogenicity	NOAEL 1700 - 2100 mg/kg (2 a) Oral. Information concerns to Propane-1,2-diol.	Rat (male / female)		No indications of carcinogenic effects are available from long-term trials.

! **Specific target organ toxicity (single exposure)**
Substance or mixture is not classified in GHS-criteria as specific target organ toxic with single exposure.

! **Specific target organ toxicity (repeated exposure)**
Substance or mixture is not classified in GHS-criteria as specific target organ toxic with repeated exposure.

Aspiration hazard
No data available

! **Additional information**
The declarations of toxicology refer to Propane-1,2-diol.
The product was classified on the basis of the calculation procedure of the Regulation (EC) No 1272/2008 [CLP/GHS].

! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 1400 mg/l (48 h)	Leuciscus idus		Analogous to a similar product.
Daphnia	LC50 18800 mg/l (96 h)	Americamysis bahia	US EPA FIFRA 72-3 (TSCA 797.1950)	Information concerns to Propane-1,2-diol.
Algae	EC50 19000 - 19300 mg/l (48 - 96 h)	Skeletonema costatum	OECD 201	Information concerns to Propane-1,2-diol.
Bacteria	EC10 > 1000 mg/l (3 h)		OECD 209	Analogous to a similar product.

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability	99 % (2 d) Information concerns to Propane-1,2-diol.		OECD 302 B	readily degradable

12.3. Bioaccumulative potential
not determined

12.4. Mobility in soil
not determined

12.5. Results of PBT and vPvB assessment
The substances in this mixture do not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects
Not known.

Behaviour in sewage plant
When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.

! **General regulation**
The declared ecologic dates are determined by analogic concluding.
The product was classified on the basis of the calculation procedure of the Regulation (EC) No 1272/2008 [CLP/GHS].

! SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.	**Name of waste**
16 01 14*	antifreeze fluids containing hazardous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

! **Recommendations for the product**
Dispose of in accordance with the local official regulations.
Return to manufacturer.

Recommendations for packaging
Totally emptied packaging: Return to supplier / manufacturer.

SECTION 14: Transport information

	ADR/RID	**IMDG**	**IATA-DGR**
14.1. UN 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. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable
No transport as bulk according IBC - Code.

Land and inland navigation transport ADR/RID
No dangerous goods as defined by these transport regulations.

Marine transport IMDG
No hazardous material as defined by the prescriptions.

Air transport ICAO/IATA-DGR
No hazardous material as defined by the prescriptions.

Transport/further information
No dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.

! SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available.

15.2. Chemical Safety Assessment
For this substance a chemical safety assessment is not required.
An exposure scenario is not required.
Chemical safety assessments for substances in this mixture were carried out.

! SECTION 16: Other information

Recommended uses and restrictions
National and local regulations concerning chemicals shall be observed.
® GHC Gerling, Holz & Co. Handels GmbH's registered trademark.

Further information
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.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.1

! **Sources of key data used**
For the preparation of this safety data sheet, information from our suppliers as well as data from the "database of registered substances" of the European Chemicals Agency (ECHA) were used.