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

### 1.1 Product identifier

**Trade name/designation** Coolex® N - water mixture >= 25 %

**Art-Nr(n).** 1682-27 - 1682-50

**Hazard components**
ethanediol, Sodium-3,5,5-trimethylhexanoate

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

* **Use of the substance/mixture**
Heat transfer fluids

### 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

| Classification according to Regulation (EC) No 1272/2008 [CLP] | Classification procedure |
|---|---|
| Acute Tox. 4, H302 | |
| STOT RE 2, H373 | |

**Hazard statements for health hazards**
H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

### * 2.2 Label elements

### * Labelling according to Regulation (EC) No. 1272/2008 [CLP]

**Hazard components**
ethanediol, Sodium-3,5,5-trimethylhexanoate

**Hazard pictograms**

GHS07

GHS08

**Signal word**
Warning

**Hazard statements**
H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

* **Precautionary statements**
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing and eye protection/face protection.
P314 Get medical advice/attention if you feel unwell.

### * 2.3 Other hazards

**Adverse human health effects and symptoms**
The product is skin resorptive.

* **Other adverse effects**
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**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.

## * SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### * 3.2 Mixtures

**Hazardous ingredients**

| CAS No. | EC No. | Substance name | Concentration | Classification according to Regulation (EC) No 1272/2008 [CLP] | SCL/ M/ ATE |
|---|---|---|---|---|---|
| 107-21-1 | 203-473-3 | ethanediol | ≥ 22.5 - 60 weight-% | Acute Tox. 4; H302<br>STOT RE 2; H373 | ATE(oral): 7712 mg/kg<br>ATE(dermal): > 3500 mg/kg<br>ATE(): > 2.5 mg/L |
| 2650-30-8 | 220-169-6 | Sodium-3,5,5-trimethylhexanoate | < 3 weight-% | Acute Tox. 4; H302<br>Skin Corr. 1; H314<br>Eye Dam. 1; H318 | ATE(oral): 1160 mg/kg |

| REACH No. | Substance name |
|---|---|
| 01-2119456816-28 | ethanediol |
| 01-2120809729-43 | Sodium-3,5,5-trimethylhexanoate |

**Remark**
The text of the H-and EUH-phrases is shown in section 16.
Aqueous solution of ethylene glycol (Ethanediol) with corrosion inhibitors.

## * SECTION 4: First aid measures

### * 4.1 Description of first aid measures

* **General information**
Remove contaminated, saturated clothing immediately.
First aider: Pay attention to self-protection!

**Following inhalation**
Remove casualty to fresh air and keep warm and at rest.
In the event of pulmonary irritation treat initially with corticoid spray, e.g. Ventolair- or Pulmicort- metered-dose aerosol (Ventolair and Pulmicort are registrated trademarks).
In the event of symptoms refer for medical treatment.
In case of respiratory standstill give artificial respiration by respiratory bag (Ambu bag) or respirator. Obtain medical assistance.

* **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**
Dizziness
Nausea
Eye Irritation
Headache

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes for the doctor**
Treat symptomatically.
Symptoms may be delayted.

## * 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.
Handle and open container with care.
Usual measures for fire prevention.

**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.

* **Storage class**
10 Combustible liquids that cannot be assigned to any of the above storage classes

* **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

## * SECTION 8: Exposure controls/personal protection

### * 8.1 Control parameters

* **DNEL worker**

| CAS No. | Substance name | DNEL value | DNEL type | Remark |
|---|---|---|---|---|
| 107-21-1 | ethanediol | 35 mg/m³ | long-term inhalative (local) | Assessment factor 2 |
| 107-21-1 | ethanediol | 106 mg/kg bw/day | long-term dermal (systemic) | Assessment factor 42 |

**DNEL Consumer**

| CAS No. | Substance name | DNEL value | DNEL type | Remark |
|---|---|---|---|---|
| 107-21-1 | ethanediol | 7 mg/m³ | long-term inhalative (local) | Assessment factor 10 |
| 107-21-1 | ethanediol | 53 mg/kg bw/day | long-term dermal (systemic) | Assessment factor 84 |

**PNEC**

| CAS No. | Substance name | PNEC Value | PNEC type | Remark |
|---|---|---|---|---|
| 107-21-1 | ethanediol | 1 mg/L | aquatic, marine water | Assessment factor 100 |
| 107-21-1 | ethanediol | 1.53 mg/kg dw | soil | |
| 107-21-1 | ethanediol | 3.7 mg/kg dw | sediment, marine water | |
| 107-21-1 | ethanediol | 10 mg/L | aquatic, freshwater | Assessment factor 10 |
| 107-21-1 | ethanediol | 10 mg/L | aquatic, intermittent release | Assessment factor 10 |
| 107-21-1 | ethanediol | 37 mg/kg dw | sediment, freshwater | |
| 107-21-1 | ethanediol | 199.5 mg/L | sewage treatment plant (STP) | Assessment factor 10 |

### * 8.2 Exposure controls

* **Appropriate engineering controls**

* **Technical measures to prevent exposure**
Industrial ventilation (local ventilation).

* **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:
Full mask complying with EN 136.
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**
red

**Odour**
hardly noticeable

**Safety relevant basis data**

| | Value | Method | Source, Remark |
|---|---|---|---|
| Odour threshold: | | | not determined |
| Melting point/freezing point | -22- -15 °C | DIN 51583 | |
| Boiling point or initial boiling point and boiling range | 104- 106 °C<br>pressure 1013 hPa | ASTM D1120 | |
| flammability | | | none |
| Lower and upper explosion limit | | | not determined |
| Flash point | | | not determined |
| Auto-ignition temperature | | | none |
| Decomposition temperature | | | No decomposition if used as directed. |
| pH | approx. 8 (20°C) | DIN 19268 | |
| Viscosity | kinematic<br>1.97- 2.88 mm²/s (20°C) | DIN 51562 | |
| Solubility(ies) | Water solubility<br>(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 | 1.034- 1.054 g/cm³ (20°C) | DIN 51757 | |
| Relative vapour density | | | not determined |
| particle characteristics | | | not applicable |

### * 9.2 Other information

* **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 sulphuric acid
Reactions with strong oxidising agents.
Reactions with alkalies.

*** 10.4 Conditions to avoid**

Ignition sources, open flames, glowing metal surfaces, etc.
Heat sources / heat.

**10.5 Incompatible materials**

Aluminium
Zinc

**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 No.107-21-1<br>ethanediol<br>LD50: 7712 mg/kg Species<br>Rat | | |
| | CAS No.2650-30-8 Sodium-<br>3,5,5-trimethylhexanoate<br>LD50: 1160 mg/kg Species<br>Rat | OECD 401 | |
| Acute dermal toxicity | CAS No.107-21-1<br>ethanediol<br>LD50: > 3500 mg/kg<br>Species Mouse | | |
| Acute inhalation toxicity | CAS No.107-21-1<br>ethanediol<br>LC50: > 2.5 mg/L Species<br>Rat<br>Exposure time 6 h | | |

*** Assessment/classification**
Harmful if swallowed.

*** Skin corrosion/irritation**

**Animal data**

| Result / Evaluation | Method | Source, Remark |
|---|---|---|
| non-irritant.<br>Species Rabbit | BASF-Test | Information concerns main component. |
| CAS No.2650-30-8 Sodium-3,5,5-<br>trimethylhexanoate<br>corrosive | OECD 431 | |

*** 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.<br>Species Rabbit | BASF-Test | Information concerns main component. |
| CAS No.2650-30-8 Sodium-3,5,5-<br>trimethylhexanoate<br>CorrosiveSpecies Bovine eye/corneal | OECD 437 | |

* **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 | | 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 vitro mutagenicity/genotoxicity | CAS No.2650-30-8 Sodium-3,5,5-trimethylhexanoate | OECD 471 | negative | |
| In vivo mutagenicity/genotoxicity | Species Rat | | negative | Data apply to the main component. |

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

* **Carcinogenicity**

**Animal data**

| | Value | Method | Result / Evaluation | Remark |
|---|---|---|---|---|
| Carcinogenicity | oral<br>NOAEL(C): 1000 mg/kg<br>Species Rat<br>Exposure duration 1 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 | oral<br>NOAEL(C): > 1000 mg/kg | | | 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**

* **Animal data**

| | Effective dose | Method | Specific effects: | Organs affected: | Source, Remark |
|---|---|---|---|---|---|
| Oral specific target organ toxicity (repeated exposure) | 300 mg/kg<br>Species Rat | OECD 452 | | | Information concerns main component. |

* **Assessment/classification**
May cause damage to kidneys through prolonged or repeated exposure if swallowed.

* **Aspiration hazard**

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

**11.2 Information on other hazards**

* **Other information**

May be absorbed through the skin.
Risk of strong health injuries in case of long-term exposition.
Poisonings effect on central nervous system.
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: > 72860 mg/L<br>Species Pimephales promelas (fathead minnow)<br>Test duration 96 h | EPA 600/4-90/027 | Information concerns main component. |
| Chronic (long-term) fish toxicity | not determined | | |
| Acute (short-term) toxicity to crustacea | EC50 > 100 mg/L<br>Species Daphnia magna (Big water flea)<br>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 6500- 13000 mg/L<br>Species Raphidocelis subcapitata<br>Test duration 96 h | EPA 600/9-78-018 | 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 | EC20 > 1995 mg/L<br>Species activated sludge (kom.)<br>Test duration 30 min | ISO 8192 | Information concerns main component. |

* **12.2 Persistence and degradability**

| | Value | Method | Source, Remark |
|---|---|---|---|
| Biodegradation | Degradation rate 90- 100 %<br>Test duration 10 d | OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A | CAS No.107-21-1 ethanediol |

| | Value | Method | Source, Remark |
|---|---|---|---|
| Biodegradation | Degradation rate 87.9 %<br>Test duration 28 d | OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C | CAS No.2650-30-8<br>Sodium-3,5,5-trimethylhexanoate |

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

* **12.3 Bioaccumulative potential**

* **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**

No data available

**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

### * EU legislation

* **Restrictions of occupation**
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

### * Other regulations (EU)

* **To follow:**
National and local regulations concerning chemicals shall be observed.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII No 3.

### * 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**
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. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

**Indication of changes**
* Data changed compared with the previous version