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Printing date Aug 30, 2019 Date of compilation: 20.4.2017

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

1.1 Product identifier

1.1.1 Trade name: Thioglycerol

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

1.2.1 Application of the substance / the mixture
Laboratory chemicals

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Cellendes GmbH
Markwiesenstr. 55
72770 Reutlingen
Telephone: +49 7121 15940 0
Fax: +49 7121 15940 99
info@cellendes.com
www.cellendes.com

1.3.1 Informing department:
Dr. Helmut Wurst
Telephone: +49 7121 15940 0

1.4 Emergency telephone number:

1.4.1 Dr. Helmut Wurst
Telephone: +49 7121 15940 0 (8 - 16 hour)

1.4.2 National Poisons Information Service (Birmingham Unit)
Telephone: +44 121 507 4123

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008
The product is not classified according to the CLP regulation.

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) No 1272/2008
Void

2.2.2 Hazard pictograms
Void

2.2.3 Signal word
Void

2.2.4 Hazard statements
Void

2.2.5 Supplemental label for certain mixtures:
According to Annex II Part 2 section 2.10 of the Regulation (EC) No 1272/2008 the label on the packaging of mixtures not intended for the general public shall bear the statement:
EUH210: Safety data sheet available on request.

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2.3 Other hazards

2.3.1 Results of PBT and vPvB assessment
2.3.1.1 PBT:
Not applicable
2.3.1.2 vPvB:
Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substance

3.2 Chemical characterisation: Mixtures
REACH registration number:
The ingredients do not require registration according to Regulation (EC) No 1207/2006 [REACH] or the registration is scheduled at a later date.

3.2.1 Characterisation
The product is a mixture. It is an aqueous solution of 3-mercaptopropane-1,2 diol (synonyme: 1-thioglycerol).

3.2.2 Substances presenting a health/environmental hazard within the meaning of Regulation (EC) No 1272/2008

CAS No	EC No	Identification	% by weight	Classification
96-27-5	202-495-0	3-mercaptopropane-1,2-diol	> 0.1 - < 1	Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335

See subsection 2.2 for further details. Full text of the hazard statements see subsection 16.2.

3.2.3 Substances for which Union workplace exposure limits have been assigned and which are not already included under point 3.2.2 (see also Section 8.)
No substances

3.2.4 Additional information
For the wording of the listed hazard phrases refer to section 16.

SECTION 4: SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 General information
No special measures required.

4.1.2 After inhalation
Ensure supply of fresh air. In the event of symptoms take medical treatment.

4.1.3 After skin contact
Instantly rinse with water.

4.1.4 After eye contact
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids

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apart. Remove contact lenses, if present and easy to do. In the event of symptoms consult an ophthalmologist.

4.1.5 In case of ingestion
If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting.
Put victim at rest. Take medical treatment immediately.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.2.1 Information for doctor
No particular measures are known - treat according to symptoms.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically. No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing agents
Water spray jet, alcohol resistant foam, carbon dioxide, dry extinguishing powder.
Co-ordinate fire-fighting measures to the fire surroundings.

5.1.2 For safety reasons unsuitable extinguishing agents
Full water jet.

5.2 Special hazards arising from the substance or mixture
In the event of fire the following can be released: carbon monoxide, carbon dioxide, sulphur oxides.

5.3 Advice for firefighters
Wear self-contained breathing apparatus. Do not inhale combustion gases.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: SECTION 6: Accidental release measures

6.1 6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel
Use personal protective clothing.
Avoid contact with eyes and skin.
Keep away from unprotected people.

6.1.2 For emergency responders
For suitable fabric for personal protective clothing see Section 8.

6.2 Environmental precautions:
Do not discharge into the drains, the aquatic environment and soil.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents, sawdust).
Send in suitable containers for recovery or disposal.

6.4 Reference to other sections
See Section 7 for information on safe handling

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See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Advice on safe handling
Comply with the minimum standards in accordance with TRGS 500.1

7.1.2 Advice on general occupational hygiene
Avoid contact with eyes and skin.
At work do not eat, drink, smoke or take drugs.
After worktime and before breaks the affected skin areas must be thoroughly cleaned.
After work protect skin by using skin protective cream.

7.2 Conditions for safe storage, including any incompatibilities

7.2.1 Advice on protection against fire and explosion
No special measures necessary.

7.2.2 Requirements for storage rooms and vessels
Keep container tightly closed in a cool, well ventilated place.
Containers which are opened must be carefully resealed to prevent leakage.

7.2.3 Advice on storage compatibility
The information about joint storage given in Table 2 of TRGS 5101 must be observed.

7.2.4 Further information on storage conditions
Keep only in the original container.

7.2.5 Storage class (for Germany only)
LGK 12 (non-combustible liquids) in accordance with TRGS 5101.

7.2.6 Specific end use(s)
The product is only intended for the uses mentioned under subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
The product does not contain substances above cut-off values for which exposure limit values have been assigned.

8.1 Exposure controls

8.1.1 Appropriate engineering controls
Technical measures and appropriate working operations should be given priority over the use of personal protective
equipment.
See also subsection 7.1.

8.1.2 Individual protection measures, such as personal protective equipment
Personal protective equipment needs to be selected specifically for the workplace, depending on concentrations and

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quantities of the hazardous substances handled. In the cases of special applications, it is recommended to check the
chemical resistance with the manufacturer/supplier of the personal protective equipment.

8.1.2.1 Eye/face protection

Tightly fitting safety glasses in accordance with EN 166.

8.1.2.2 Skin protection

Hand protection: If prolonged or repeated direct skin contact with the product is possible, suitable protective gloves must be worn.
Suitable: protective gloves of butyl rubber (0.7 mm; breakthrough time ³ 8 h).
Completely unsuitable: textile or leather gloves.
Wear cotton undermitten if possible.
The protective gloves to be used must be comply with the specifications of the standard EN 374.
Body protection: Closed work clothing.

8.1.2.3 Respiratory protection

With correct and proper use, and under normal conditions, respiratory protection is not required.

8.1.2.4 Thermal hazards

Not relevant.

8.1.3 Environmental exposure controls

See Section 6.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	slight, characteristic
Odour threshold:	no data available
pH (as supplied) (20°C):	no data available
pH (of an aqueous solution):	no data available
Melting point/freezing point (°C):	not determined
Boiling point and boiling range (°C):	100 (water)
Flash point (°C), closed cup:	not relevant
Evaporation rate:	not determined
Flammability (solid, gas):	not relevant
Upper flammability or explosive limit:	not relevant
Lower flammability or explosive limit:	not relevant
Vapour pressure (20°C) (hPa):	23 (water)
Vapour density (20°C):	not determined
Relative density (20°C):	not determined
Solubility in water:	miscible
Soluble in:	not determined
Partition coefficient: n-octanol/water:	- 0.84 (3-mercaptopropane-1,2-diol) (external safety data sheet)
Auto-ignition temperature (°C):	not self-igniting
Decomposition temperature (°C):	not determined
Dynamic viscosity (mPa · s) (20°C):	no data available
Explosive properties:	not explosive
Oxidising properties:	not relevant

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9.2 Other information
None.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available for the product.

10.2 Chemical stability
The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
When used as intended, no hazardous reaction known.

10.4 10.4 Conditions to avoid
No particular conditions known.

10.5 Incompatible materials
Avoid contact with strong oxidising agents.

10.6 Hazardous decomposition products
No hazardous decomposition products known.
For hazardous combustion products see subsection 5.2.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
No data are available for the product.

11.1.1 Acute toxicity
LD50 rat, oral (mg/kg) 670 (3-mercaptopropane-1,2-diol) (external safety data sheet)
LD50 rabbit, dermal (mg/kg) 699 (3-mercaptopropane-1,2-diol) (external safety data sheet)
LC50 rat, inhalation (mg/l/4h) No data available.

11.1.2 Skin corrosion/irritation
3-mercaptopropane-1,2-diol as a pure substance is classified as Skin Irrit. 2, but its concentration in this mixture is
below generic concentration limits triggering a classification.

11.1.3 Serious eye damage/irritation
3-mercaptopropane-1,2-diol as a pure substance is classified as Eye Irrit. 2, but its concentration in this mixture is below generic concentration limits triggering a classification.

11.1.4 Respiratory or skin sensitisation
The mixture has not been tested.

11.1.5 Germ cell mutagenicity
The mixture does not contain substances classified as germ cell mutagens.

11.1.6 Carcinogenicity
The mixture does not contain substances classified as carcinogenic.

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11.1.7 Reproductive toxicity
The mixture does not contain substances classified as toxic for the reproduction.

11.1.8 Specific target organ toxicity (STOT)-single exposure
The mixture contains substances classified as being a specific target organ toxicant after single exposure in concentrations below the cut-off values and below generic concentration limits triggering a classification.

11.1.9 Specific target organ toxicity (STOT)-repeated exposure
The mixture does not contain substances classified as being a specific target organ toxicant after repeated exposure.

11.1.10 Aspiration hazard
The mixture does not contain aspiration toxicants.

11.1.11 Symptoms related to the physical, chemical and toxicological characteristics
The product has not been tested.

11.1.12 Delayed and immediate effects as well as chronic effects from short and long-term exposure
The product has not been tested.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

96 h LC50	(fish)	No data available.
48 h EC50	(daphnia)	No data available.
72 h EC50	(algae)	No data available.

Behaviour in sewage works:
The behaviour of the product in sewage treatment plants has not been tested. Do not discharge into the drains.

12.2 Persistence and degradability

The product has not been tested.

Chemical oxygen demand (COD):	No data available.
Biochemical oxygen demand (BOD5):	No data available.
AOX-hint:	Not to apply.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:	- 0.84 (3-mercaptopropane-1,2-diol) (external safety data sheet)

The product has not been tested. Bioaccumulation is not expected.

12.4 Mobility in soil
The product has not been tested.

12.5 Results of PBT and vPvB assessment
The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

12.6 Other adverse effects

Ozone depletion potential	No data available.
Photochemical ozone creation potential	No data available.
Global warming potential	No data available.

The product is classified as hazardous to water.
Contains according to the formulation following compounds of directives 2006/11/EC and 80/68/EEC:
None.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal according to official state regulations. Sewage disposal must be avoided.
Consult the local waste disposal expert about waste disposal.
Disposal operations/recovery operations according to Directive 2008/98/EC

Disposal operations:	D 9	Physico-chemical treatment
Recovery operations:	R 3	Recycling/reclamation of organic substances which are not used as solvents

Properties of waste which render it hazardous in accordance with Annex III of Directive 2008/98/EC
None.

13.1.1 Product / unused product

Waste disposal corresponding to European Waste Catalogue. Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations. Referring to the particular case they should be completed or revised.

EC waste code:	16 05 09
Waste notation:	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

13.1.2 Contaminated packaging

Recommendation:	Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Recommended cleansing agent:	Water.
Packaging that cannot be cleaned:	
EC waste code:	15 01 02
Waste notation:	Plastic packaging

SECTION 14: Transport information

14.1 UN number

No dangerous good in accordance with the UN Model Regulations (ADR/RID/ADN/IMDG/ICAO/IATA).

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not relevant.

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SECTION 15: Regulatory information

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

15.1.1 Information regarding relevant Union safety, health and environmental provisions
None.

15.1.2 Information regarding national laws/national measures that may be relevant (for Germany only)

Indications on restriction of occupation:	Not relevant
Major-accident Regulation:	Not relevant
Fire and explosion hazards:	Not relevant
Regulation on clean air (TA Luft):	Not relevant
Water hazard class:	WGK 2 – hazardous to water (calculation according to KBwS)3 The Federal State Enactment for Facilities to Handle Water Endangering Substances (German VAwS–Anlagen-Verordnung) has to be observed.
German Ordinance on Hazardous Substances (in accordance with EC-Directive 98/24/EC):	Article 6 must be observed.
Technical Rules for Hazardous Substances1:	TRGS 400, 500, 510
Rules of the employers' liability insurance association2:	DGUV Regel 112-189, 112-192, 112-195

15.2 Chemical safety assessment
No chemical safety assessment has been carried out for a substance in the product.

SECTION 16: Other information

16.1 Keeping (restrictions)
Article 8 paragraphs 5 and 6 of the German Ordinance on Hazardous Substances has to be observed (only for Germany). Supply to industry consumer, laboratories

16.2 Full text of the hazard statements referred to under subsection 2.1 and point 3.2.2 of the Safety Data Sheet

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

16.3 Key to abbreviations and acronyms used in the safety data sheet

ADN:	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR:	Accord européen relatif au transport international des marchandises dangereuses par route
AOX:	adsorbable organically bound halogens
ICAO/IATA:	International Civil Aviation Organisation/International Air Transport Association-Dangerous Goods Regulations
IMDG-Code:	International Maritime Dangerous Goods-Code
KBwS:	Commission for the Evaluation of substances hazardous to waters (Kommission Bewertung wassergefährdende Stoffe)
LGK:	Lagerklasse (storage class)
OECD:	Organisation for Economic Co-operation and Development

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PBT:	*persistent, bioaccumulative and toxic*
RID:	*Règlement international concernant le transport des marchandises dangereuses par chemin de fer*
TRGS:	*Technische Regeln für Gefahrstoffe (Technical Rules for Hazardous Substances)*
vPvB:	*very persistent and very bioaccumulative*