



# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 12/11/2014

Version 3.0

## SECTION 1. Identification

### Product identifier

Product number	100700
Product name	Thioglycolic acid GR for analysis Reag. Ph Eur
CAS-No.	68-11-1

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

Identified uses	Reagent for analysis
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Acute toxicity, Category 3, Oral, H301  
Acute toxicity, Category 3, Inhalation, H331  
Acute toxicity, Category 3, Dermal, H311  
Skin corrosion, Category 1B, H314  
Serious eye damage, Category 1, H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

#### Hazard pictograms



Signal Word  
Danger

#### Hazard Statements

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

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H314 Causes severe skin burns and eye damage.

## *Precautionary Statements*

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P322 Specific measures (see supplemental first aid instructions on this label).

P361 Remove/ Take off immediately all contaminated clothing.

P363 Wash contaminated clothing before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

## **Other hazards**

None known.

## **SECTION 3. Composition/information on ingredients**

Formula

HSCH<sub>2</sub>COOH

C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>S (Hill)

Molar mass

92.11 g/mol

## **Hazardous ingredients**

*Chemical Name ( Concentration)*

CAS-No.

*Thioglycolic acid ( >= 90 % - <= 100 % )*

68-11-1

Exact percentages are being withheld as a trade secret.

## **SECTION 4. First aid measures**

### **Description of first-aid measures**

*General advice*

First aider needs to protect himself.

*Inhalation*

After inhalation: fresh air. If breathing stops: immediately apply artificial respiration, if necessary also oxygen. Call a physician immediately.

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## *Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

## *Eye contact*

After contact with eyes: Rinse with plenty of water keeping eyelids open, protecting the unaffected eye (at least 10 minutes). Seek medical advice immediately!

## *Ingestion*

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralize.

Never give anything by mouth to an unconscious person.

## **Most important symptoms and effects, both acute and delayed**

Irritation and corrosion, Cough, Shortness of breath  
Risk of blindness!

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

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

#### *Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

Sulfur oxides

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapors/mists with a water spray jet.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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Advice for emergency responders: Protective equipment see section 8.

## Environmental precautions

Do not empty into drains.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

## SECTION 7. Handling and storage

### Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Transport and store in stainless steel with PE lining or in polyester containers. Transport times max. 1 - 2 weeks. Temperatures above +50°F cause alterations to the goods transported or stored (by formation of 1,4-dithioglycolides).

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

|| Store at +2°C to +8°C (+36°F to +46°F).

## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>Thioglycolic acid 68-11-1</i>			
ACGIH	Time Weighted Average (TWA):	1 ppm	Can be absorbed through the skin.
	Skin designation:		
NIOSH/GUIDE	Recommended exposure limit (REL):	1 ppm 4 mg/m <sup>3</sup>	Can be absorbed through the skin.
	Skin designation:		
Z1A	Time Weighted Average (TWA):	1 ppm 4 mg/m <sup>3</sup>	Can be absorbed through the skin.
	Skin designation (Final Rule Limit applies):		

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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## Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### *Hygiene measures*

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### *Eye/face protection*

Tightly fitting safety goggles

### *Hand protection*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### *Other protective equipment:*

Acid-resistant protective clothing.

### *Respiratory protection*

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	unpleasant
Odor Threshold	No information available.
pH	1 at 68 °F ( 20 °C)
Melting point	-16.5 °C
Boiling point/boiling range	428 °F ( 220 °C) at 1,013 hPa (decomposition)
Flash point	268.7 °F ( 131.5 °C) Method: DIN 51758
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.

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Upper explosion limit	No information available.
Vapor pressure	0.1 hPa at 68 °F ( 20 °C)
Relative vapor density	No information available.
Density	1.325 g/cm <sup>3</sup> at 68 °F ( 20 °C)
Relative density	No information available.
Water solubility	at 68 °F ( 20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: 0.09 (experimental) (Lit.) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	6.55 mPa.s at 68 °F ( 20 °C)
Explosive properties	Not classified as explosive.
Oxidizing properties	none

### SECTION 10. Stability and reactivity

#### Reactivity

highly reactive

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

#### Chemical stability

tendency towards instability

#### Possibility of hazardous reactions

Violent reactions possible with:

Organic Substances, Strong oxidizing agents, strong alkalis

#### Conditions to avoid

Strong heating.

#### Incompatible materials

various metals

#### Hazardous decomposition products

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in the event of fire: See section 5.

## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Inhalation, Eye contact, Skin contact

#### *Target Organs*

Eyes

Skin

Respiratory system

#### *Acute oral toxicity*

LD50 Rat: 73 mg/kg

OECD Test Guideline 401

absorption

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

#### *Acute inhalation toxicity*

absorption

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

#### *Acute dermal toxicity*

absorption

Acute toxicity estimate : 300.1 mg/kg

Expert judgment

#### *Skin irritation*

Causes burns.

#### *Eye irritation*

Causes serious eye damage. Risk of blindness!

#### *Sensitization*

Sensitization test: Guinea pig

Result: negative

Method: OECD Test Guideline 406

Sensitization possible in predisposed persons.

#### *Genotoxicity in vivo*

Micronucleus test

Result: negative

Method: OECD Test Guideline 474

#### *Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

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### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

After absorption:

We have no description of any toxic symptoms.

The following applies to mercaptans in general: offensive odor.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12. Ecological information**

### **Ecotoxicity**

#### *Toxicity to fish*

LC50 Pimephales promelas (fathead minnow): 30 mg/l; 96 h (ECOTOX Database)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 38 mg/l; 48 h (External MSDS)

#### *Toxicity to algae*

IC50 algae: 13 mg/l; 72 h

OECD Test Guideline 201

### **Persistence and degradability**

#### *Biodegradability*

70 %; 28 d

OECD Test Guideline 301D

Readily biodegradable.

#### *Theoretical oxygen demand (ThOD)*

1,220 mg/g

(Lit.)



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## Bioaccumulative potential

*Partition coefficient: n-octanol/water*

log Pow: 0.09

(experimental)

(Lit.) Bioaccumulation is not expected.

## Mobility in soil

No information available.

*Additional ecological information*

Discharge into the environment must be avoided.

## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

## SECTION 14. Transport information

### Land transport (DOT)

UN number

UN 1940

Proper shipping name

THIOGLYCOLIC ACID

Class

8

Packing group

II

Environmentally hazardous

--

### Air transport (IATA)

UN number

UN 1940

Proper shipping name

THIOGLYCOLIC ACID

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

no

### Sea transport (IMDG)

UN number

UN 1940

Proper shipping name

THIOGLYCOLIC ACID

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

yes

EmS

F-A S-B

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## SECTION 15. Regulatory information

### United States of America

#### SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

#### DEA List I

Not listed

#### DEA List II

Not listed

### US State Regulations

#### Massachusetts Right To Know

*Ingredients*

Thioglycolic acid

#### Pennsylvania Right To Know

*Ingredients*

Thioglycolic acid

#### New Jersey Right To Know

*Ingredients*

Thioglycolic acid

#### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

#### Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

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## SECTION 16. Other information

#### Training advice

Provide adequate information, instruction and training for operators.

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## Labeling

### *Hazard pictograms*



### *Signal Word*

Danger

### *Hazard Statements*

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

### *Precautionary Statements*

#### Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

### **Full text of H-Statements referred to under sections 2 and 3.**

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 12/11/2014

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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