SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Mercaptoacetic acid, sodium salt
Cat No.: 148890000; 148890050; 148890500; 148890010; 148892500
Synonyms Thioglycolic acid, sodium salt; Sodium thioglycolate
CAS-No 367-51-1
EC-No. 206-696-4
Molecular Formula C2 H3 Na O2 S

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company UK entity/business name
Fisher Scientific UK
Bishop Meadow Road, Loughborough,
Leicestershire LE11 5RG, United Kingdom

EU entity/business name
Acros Organics BVBA
Janssen Pharmaceuticaalana 3a
2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US:001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No.US:001-800-424-9300 / Europe:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Substances/mixtures corrosive to metal Category 1 (H290)

Health hazards
SAFETY DATA SHEET

Mercaptoacetic acid, sodium salt

Revision Date 14-Dec-2020

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word  Danger

Hazard Statements
H290 - May be corrosive to metals
H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H317 - May cause an allergic skin reaction

Precautionary Statements
P390 - Absorb spillage to prevent material damage
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P280 - Wear protective gloves/protective clothing
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Stench
Toxic to terrestrial vertebrates

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>367-51-1</td>
<td>EEC No. 206-696-4</td>
<td>&gt;95</td>
<td>Met. Corr. 1 (H290) Acute Tox. 3 (H301) Acute Tox. 4 (H312)</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Mercaptoacetic acid, sodium salt

Revision Date 14-Dec-2020

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Self-Protection of the First Aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

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

Notes to Physician
Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides, Sulfides, Sodium oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep under nitrogen. Keep refrigerated. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL)  
No information available

Predicted No Effect Concentration (PNEC)  
No information available.

8.2. Exposure controls

Engineering Measures  
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. 
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection  
Goggles (European standard - EN 166)

Hand Protection  
Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile rubber</td>
<td>See manufacturers</td>
<td>-</td>
<td>EN 374</td>
<td>EN 374 (minimum requirement)</td>
</tr>
<tr>
<td>Neoprene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin and body protection  
Long sleeved clothing

Inspect gloves before use. 
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use  
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
**Recommended Filter type:** Particulates filter conforming to EN 143

Small scale/Laboratory use  
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
**Recommended half mask:** Particle filtering: EN149:2001
When RPE is used a face piece Fit Test should be conducted
Environmental exposure controls  No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>-3.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>No information available</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Formula</td>
<td>C2 H3 Na O2 S</td>
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<tr>
<td>Molecular Weight</td>
<td>114.09</td>
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<tr>
<td>Evaporation Rate</td>
<td>Solid</td>
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<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
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<tr>
<td>Explosion Limits</td>
<td>No data available</td>
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</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6.8-7</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Solid</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>1000 g/L (20°C)</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>log Pow</td>
</tr>
<tr>
<td>Sodium thioglycolate</td>
<td>-3.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density / Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Solid</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

Hazardous Polymerization  No information available.
Hazardous Reactions  None under normal processing.

10.4. Conditions to avoid

Incompatible products. Exposure to moist air or water.

10.5. Incompatible materials
10.6. Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides. Sulfides. Sodium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;
   Oral Category 3
   Dermal Category 4
   Inhalation Based on available data, the classification criteria are not met

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>504 mg/kg (Mouse)</td>
<td>293 mg/kg (Mouse)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>50-200 mg/kg (Rat)</td>
<td>1000-2000 mg/kg (female Rat)</td>
<td>-</td>
</tr>
</tbody>
</table>

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;
   Respiratory No data available
   Skin Category 1
      May cause sensitization by skin contact

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available
   There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available
   Target Organs No information available.

(j) aspiration hazard; Not applicable
   Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed
Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

11.2. Information on other hazards
SAFETY DATA SHEET

Endocrine Disrupting Properties
Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td></td>
<td></td>
<td>EC50: 38 mg/L/48h</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Persistence
Readily biodegradable
Soluble in water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential
Bioaccumulation is unlikely

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>-3.78</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5. Results of PBT and vPvB assessment
Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties
Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects
Persistent Organic Pollutant
Ozone Depletion Potential
This product does not contain any known or suspected substance.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from Residues/Unused Products
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC)
According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information
Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO
SAFETY DATA SHEET

Mercaptoacetic acid, sodium salt

Revision Date 14-Dec-2020

14.1. UN number UN2923
14.2. UN proper shipping name Corrosive solid, toxic, n.o.s
   Technical Shipping Name Sodium thioglycolate
14.3. Transport hazard class(es) 8
   Subsidiary Hazard Class 6.1
14.4. Packing group III

ADR

14.1. UN number UN2923
14.2. UN proper shipping name Corrosive solid, toxic, n.o.s
   Technical Shipping Name Sodium thioglycolate
14.3. Transport hazard class(es) 8
   Subsidiary Hazard Class 6.1
14.4. Packing group III
14.5. Environmental hazards No hazards identified
14.6. Special precautions for user No special precautions required
14.7. Maritime transport in bulk according to IMO instruments Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories
X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>206-696-4</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-33787</td>
</tr>
</tbody>
</table>

Not applicable

National Regulations

WGK Classification

<table>
<thead>
<tr>
<th>Component</th>
<th>Germany - Water Classification (VwVwS)</th>
<th>Germany - TA-Luft Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium thioglycolate</td>
<td>WGK1</td>
<td></td>
</tr>
</tbody>
</table>

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

ACR14889
15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H290 - May be corrosive to metals
H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H317 - May cause an allergic skin reaction

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date 04-Feb-2013
Revision Date 14-Dec-2020
Revision Summary Update to CLP Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The information
relates only to the specific material designated and may not be valid for such material used in combination with any other
materials or in any process, unless specified in the text

End of Safety Data Sheet