

## MATERIAL SAFETY DATA SHEET

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Version 1.5

## Section 1 - Product and Company Information

Product Name 3-MERCAPTOPROPIONIC ACID  
Product Number 63770  
Brand FLUKA

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
3-MERCAPTOPROPIONIC ACID	107-96-0	

Formula C3H6O2S  
Synonyms beta-Mercaptopropanoic acid \* 3-Mercaptopropionic acid \* 3MPA \* Propanoic acid, 3-mercapto- (9CI) \* 3-Thiopropionic acid \* beta-Thiopropionic acid \* 3-Thiopropionic acid  
RTECS Number: UF5270000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Toxic.  
Toxic if swallowed. Causes burns.  
Stench.

## HMIS RATING

HEALTH: 3  
FLAMMABILITY: 2  
REACTIVITY: 0

## NFPA RATING

HEALTH: 3  
FLAMMABILITY: 2  
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

199.4 °F    93 °C    Method: closed cup

#### EXPLOSION LIMITS

Lower: 1.6 %

#### AUTOIGNITION TEMP

350 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed.

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### Section 8 - Exposure Controls / PPE

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#### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.  
Hand: Compatible chemical-resistant gloves.  
Eye: Chemical safety goggles.  
Other: Faceshield (8-inch minimum).

## GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

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## Section 9 - Physical/Chemical Properties

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Appearance	Color: Colorless Form: Clear liquid Odor: Stench.	
Property	Value	At Temperature or Pressure
Molecular Weight	106.14 AMU	
pH	N/A	
BP/BP Range	110.0 - 111.0 °C	15 mmHg
MP/MP Range	17.0 - 19.0 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	1.22 g/cm <sup>3</sup>	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	199.4 °F 93 °C	Method: closed cup
Explosion Limits	Lower: 1.6 %	
Flammability	N/A	
Autoignition Temp	350 °C	
Refractive Index	1.492	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.  
Materials to Avoid: Bases, Oxidizing agents, Reducing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides.

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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#### Section 11 - Toxicological Information

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##### ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: Toxic if swallowed.

##### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Nausea, dizziness, and headache. Exposure can cause: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

##### TOXICITY DATA

Oral

Rat

96 mg/kg

LD50

Intraperitoneal

Rat

66 MG/KG

LD50

Remarks: Behavioral: Convulsions or effect on seizure threshold.

Intraperitoneal

Mouse

38120 UG/KG

LD50

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#### Section 12 - Ecological Information

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No data available.

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#### Section 13 - Disposal Considerations

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##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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#### Section 14 - Transport Information

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DOT

Proper Shipping Name: Corrosive liquids, toxic, n.o.s.  
UN#: 2922  
Class: 8  
Packing Group: Packing Group II  
Hazard Label: Corrosive  
Hazard Label: Toxic substances.  
PIH: Not PIH

#### IATA

Proper Shipping Name: Corrosive liquid, toxic, n.o.s.  
IATA UN Number: 2922  
Hazard Class: 8  
Packing Group: II

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### Section 15 - Regulatory Information

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#### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T  
Indication of Danger: Toxic.  
R: 25-34  
Risk Statements: Toxic if swallowed. Causes burns.  
S: 7-26-36/37/39-45  
Safety Statements: Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.  
Risk Statements: Toxic if swallowed. Causes burns.  
Safety Statements: Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
US Statements: Stench.

#### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
TSCA INVENTORY ITEM: Yes

#### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.  
DSL: Yes  
NDSL: No

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### Section 16 - Other Information

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#### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

#### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any

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