

MATERIAL SAFETY DATA SHEET

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Version 1.2

Section 1 - Product and Company Information

Product Name ETHYL THIOCYANATE
Product Number 04880
Brand FLUKA

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS MO 63103 US
Technical Phone: 314 771 5765
Emergency Phone: 414 273 3850 Ext. 5996
Fax: 800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ETHYL THIOCYANATE	542-90-5	Yes

Formula C3H5NS
Synonyms Aethylrhodanid (German) * Ethane, thiocyanato- *
Ethyl rhodanate * Ethyl sulfocyanate * Ethyl
thiocyanate * Ethylthiokyanat (Czech)
RTECS Number: XK9900000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Combustible (USA) Flammable (EU). Highly Toxic (USA) Toxic (EU).
Toxic by inhalation, in contact with skin and if swallowed.
Irritating to eyes and respiratory system.
Lachrymator. Causes severe irritation.

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.

INHALATION EXPOSURE

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

Section 5 - Fire Fighting Measures

FLASH POINT

107.6 °F 42 °C Method: closed cup

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. 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): Combustible liquid. Emits toxic fumes under fire conditions.

EXPOSURE HAZARD(S)

Material: Severe irritant. Lachrymator.

Section 6 - Accidental Release Measures

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

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

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. Store in a cool dry place.

SPECIAL REQUIREMENTS

Moisture sensitive.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance

Color: Faintly yellow

Form: Clear liquid

Property

Value

At Temperature or Pressure

Molecular Weight	87.14 AMU	
pH	N/A	
BP/BP Range	144 - 146 °C	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	1.011 g/cm3	
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	107.6 °F 42 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.462	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Conditions of Instability: May decompose on exposure to moist air or water.

Materials to Avoid: Strong oxidizing agents, Strong bases, Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS

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

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Multiple Routes: May be fatal if inhaled, swallowed, or absorbed through skin. High concentrations are extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes, and skin.

SIGNS AND SYMPTOMS OF EXPOSURE

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intraperitoneal

Mouse
10 MG/KG
LD50
Remarks: Peripheral Nerve and Sensation:Flaccid paralysis
without anesthesia (usually neuromuscular blockage).
Behavioral:Convulsions or effect on seizure threshold. Lungs,
Thorax, or Respiration:Respiratory stimulation.

Subcutaneous
Mouse
70 MG/KG
LD50
Remarks: Peripheral Nerve and Sensation:Flaccid paralysis
without anesthesia (usually neuromuscular blockage). Lungs,
Thorax, or Respiration:Respiratory stimulation. Lungs, Thorax,
or Respiration:Other changes.

Intravenous
Mouse
18 MG/KG
LD50

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

This combustible material may be burned in a chemical incinerator
equipped with an afterburner and scrubber. Observe all federal,
state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Toxic liquids, flammable,
organic, n.o.s.
UN#: 2929
Class: 6.1
Packing Group: Packing Group II
Hazard Label: Toxic substances.
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: Toxic liquid, flammable,
organic, n.o.s.
IATA UN Number: 2929
Hazard Class: 6.1
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn
Indication of Danger: Harmful.
R: 10 20/21/22 36/37/38
Risk Statements: Flammable. Harmful by inhalation, in contact
with skin and if swallowed. Irritating to eyes, respiratory
system and skin.
S: 26 36/37

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Combustible (USA) Flammable (EU). Highly Toxic (USA) Toxic (EU).

Risk Statements: Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes and respiratory system.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. 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: Lachrymator. Causes severe irritation.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

NOTES: This product is subject to SARA section 313 reporting requirements - cyanide compounds.

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: No

NDSL: Yes

Section 16 - Other Information

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 guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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