

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: 1,3- Dithiane-2-carboxylic acid ethyl ester
Synonyms: Glyoxylic acid ethyl ester trimethylenemercaptal
Company Identification: PI Chemicals Ltd.
5rd Floor, 88 Cailun Road
Zhangjiang Hi-Tech Park
Pudong New Area, Shanghai China, 201203
Telephone Number: 86-21-58953700
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Section 2 - Product Information

Catalog Number: PI- 11231
CAS Number: 20462-00-4
MDL Number: MFCD00006657
EC Number: 243-838-4
Purity: 98%

Section 3 - Physical and Chemical Properties

Physical state: Liquid
Color: Light yellow clear
Odor: Not available
Molecular Formula: $C_7H_{12}O_2S_2$
Molecular Weight: 192.3
Freezing/Melting Point: Not available
Boiling Point: 75-77 °C/0.2 mmHg(lit.)
Flash Point: 55 °C - closed cup
Autoignition Temperature: Not available
Refractive Index (nD20): Not available
Density: 1.22 g/mL at 25 °C(lit.)
Decomposition Temperature: Not available
Solubility: Not available

Section 4 - Hazards Identification

Eye: Causes eye irritation.

Skin:	Causes skin irritation. Harmful if absorbed through the skin.
Ingestion:	May cause irritation of the digestive tract. Toxic if swallowed.
Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 - First Aid Measures

Eye:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:	Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
Ingestion:	Get medical aid immediately. Wash mouth out with water.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 - Stability and Reactivity

Chemical Stability:	Stable under recommended temperatures and pressures.
Materials to avoid:	Strong oxidizing agents, Strong acids.
Conditions to Avoid:	Incompatible materials.
Hazardous Decomposition Products:	Carbon oxides, Sulphur oxides.
Hazardous Polymerization:	Has not been reported.

Section 7 - Handling and Storage

Handling:	Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Storage:	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas.

Section 8 - Personal Protection

Eyes:	Wear appropriate protective eyeglasses.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Fire and Explosion Hazard Data

General Information:	As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.
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Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 10 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 11 - Toxicological Information

RTECS#: CAS# 20462-00-4: Not available.

LD50/LC50: RTECS: Not available.

Carcinogenicity: 1,3- Dithiane-2-carboxylic acid ethyl ester - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Environmental information

Not available

Section 13 - Disposal Consideration

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.

Section 14 - Transport Information

IATA: UN-Number: 3272 Class: 3 Packing group: III

IMO: UN-Number: 3272 Class: 3 Packing group: III.

RID/ADR: UN-Number: 3272 Class: 3 Packing group: III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Indication of Danger: Highly Flammable

Risk Phrases:

R10: Flammable.

Safety Phrases:

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 20462-00-4: 3

Canada

CAS# 20462-00-4: Not available

US Federal

TSCA

CAS# 20462-00-4 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Additional Information

MSDS Creation Date: May 5, 2008

Update: July 17, 2008

The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.