

SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 - Product Identifiers

Catalog Name: P-321N
Description: Thiophanate
CAS No.: 23564-06-9

1.2 - Relevant Identified Uses of the Substance or Mixture

Laboratory Chemical Reference Material

1.3 - Supplier Details

Company: AccuStandard, Inc.
125 Market St.
New Haven, CT 06513 USA

Telephone Number: 203-786-5290

Fax: 203-786-5287

Email: edocs@accustandard.com

1.4 - Emergency Telephone Number

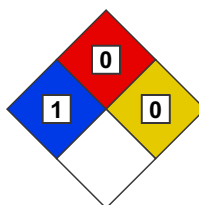
Emergency Phone #: AccuStandard, Inc.
1-203-786-5290
Hours: Monday to Friday 8:00am to 5:00pm EST

SECTION 2 - HAZARDS IDENTIFICATION

2.1 - GHS Label Elements



Signal Word: None



| | |
|---|-----------------|
| 1 | HEALTH |
| 0 | FLAMMABILITY |
| 0 | PHYSICAL HAZARD |

2.2 - Other Hazards

2.2.1 - Symptom of Exposure Health/Environment

Not considered to be a hazardous substance or mixture according to the GHS classification system. Exposure to any chemical should be kept to a minimum. Always follow safe industrial hygiene practices when handling this product.

2.2.2 - Potential Health Effects

May be irritating to eyes.

May be irritating to skin.

Not expected to be a respiratory hazard based on normal conditions of use.

2.2.3 - Routes of Entry

Inhalation, ingestion or skin contact.

SECTION 2 - HAZARDS IDENTIFICATION - continued**2.2 - Other Hazards** - continued**2.2.4 - Carcinogenicity**

This product is or contains a component that is not listed (ACGIH, IARC, NTP, OSHA) as a cancer causing agent.

SECTION 3 - COMPOSITION / ANALYTES DATA

Description: Thiophanate

Synonyms: Diethyl-4-4-o-phenylene-bis 3-thioallophanate

Molecular Weight: 370.48

Molecular Formula: C₁₄H₁₈N₄O₄S₂

EC#: 245-741-2

| Analyte | CAS Number | % Concentration | ACGIH -TLV (mg/m ³) | | | OSHA -PEL (mg/m ³) | | |
|-------------|------------|-----------------|---------------------------------|------|------|--------------------------------|------|------|
| | | | TWA | STEL | Skin | TWA | STEL | Skin |
| Thiophanate | 23564-06-9 | 100.000 | | | | | | |

SECTION 4 - FIRST AID MEASURES**4.1 - First Aid Procedures - General**

Get medical assistance if any adverse effects should develop.

4.2 - Eye Contact

Eye contact: Immediately flush with plenty of water.

4.3 - Skin Contact

Skin contact: Wash thoroughly with soap and water.

4.4 - Inhalation

Inhalation: Remove to fresh air. Get medical attention if cough or other symptoms develop.

4.5 - Ingestion

Ingestion: Not hazardous. First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 - FIRE FIGHTING MEASURES**5.1 - Flammable Properties**

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

5.2 - Extinguishing Media

Use alcohol foam, carbon dioxide, dry chemical, or water spray when fighting fires involving this material.

5.3 - Protection of Firefighters

As in any fire, wear self-contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES**6.1 - Spill Response**

Wear suitable protective equipment listed under Exposure Controls / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Dispose as hazardous waste. Comply with Federal, State and local regulations.

SECTION 7 - HANDLING AND STORAGE

Store in a cool, dry area.

Avoid inhalation.

Use with adequate ventilation.

Avoid prolonged or repeated exposure.

SECTION 8 - EXPOSURE CONTROLS**8.1 - Engineering Controls/PPE**

Wash thoroughly after handling.

8.2 - General Hygiene Considerations

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AF/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective gloves should be worn to prevent skin contact.

(Butyl, viton or equivalent)

Use eye protection tested and approved under the appropriate government standards such as NIOSH (US) or EN 166 (EU).

All recommendations are advisory only and must be evaluated by an industrial hygienist and/or safety officer familiar with the specific situation of anticipated use, such as concentration and amount of the substance in the workplace. Any recommendation should not be construed as offering an approval for any specific use of the product.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystalline solid

Odor: N/A

Odor Threshold: N/A

pH: N/A

Melting Point: 200 °C

Boiling Point: 480 °C

Flash Point: N/A

Evaporation Rate (Butyl Acetate=1): N/A

Flammability Class: N/A

Lower Flammability Level: N/A

Upper Flammability Level: N/A

Vapor Pressure: < 0.01 mmHg @ 25 °C

Vapor Density (Air = 1): N/A

Specific Gravity: N/A

Solubility in Water: 77.74 mg/L

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES - continued

Partition Coefficient: log Kow : 2.08

Autoignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

VOC Content: N/A

Percent Volatile: N/A

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Materials to Avoid: Water
Oxidizers

Hazardous Decomposition: Oxides of carbon, nitrogen and sulfur; Hydrogen sulfide

Hazardous Polymerization: Will not occur

Condition to Avoid: Decomposes under alkaline conditions

SECTION 11 - TOXICOLOGICAL INFORMATION**Human Health Toxicity**

See section 2 for specific toxicological information for the ingredients of this product.

LD50 (Oral): Rat - >2000 mg/kg

LD50 (Dermal) : Rabbit - >2000 mg/kg

LC50 (Inhalation): N/A

No other information related to the toxicological properties of this product is available at this time.

SECTION 12 - ECOLOGICAL INFORMATION**Environmental Toxicity**

By complying with sections 6 and 7 there should be no release to the environment.

LC50 (Fish): N/A

EC50 (Aquatic Invertebrate): N/A

BCF: N/A

No other information related to the ecological properties of this product is available at this time.

SECTION 13 - DISPOSAL CONSIDERATIONS

Recycle or incinerate at any EPA approved facility or dispose in compliance with Federal, State and local regulations. Empty containers must be triple-rinsed prior to disposal.

SECTION 14 - TRANSPORT INFORMATION**Transportation Information (DOT/IATA)**

UN Number: NR

UN Shipping Class: NR

UN Packing Group: NR

UN Proper Shipping Name: Not Regulated for Transport

SECTION 14 - TRANSPORT INFORMATION - continued

Poison by Inhalation: No

Marine Pollutant: No

SECTION 15 - REGULATORY INFORMATION

The CAS number of this product is NOT listed on the TSCA Inventory.

This product is subject to SARA section 313 reporting requirements.

For laboratory, research and development use only. Not for manufacturing or commercial purposes.

In addition to federal and state regulations, local regulations may apply. Check with your local regulatory authorities.

SECTION 16 - OTHER INFORMATION

This document has been designed to meet the requirements of OSHA, ANSI, GHS and CHIPs regulations.

The statements contained herein are offered for informational purposes only and are based on technical data that we believe to be accurate. The manufacturer will not assume any liability for the accuracy and completeness of this information. Final determination of the suitability of the material is the responsibility of the user. Although certain hazards are described herein, the user should not presume that these are the only hazards that exist. Since conditions and manner of use are outside of the manufacturers control, we make

**NO WARRANTY OF MERCHANTABILITY, EXPRESSED OR IMPLIED, AND ASSUME NO LIABILITY
RESULTING FROM ITS USE.**

Legend : N/A = Not Available ND = Not Determined NR = Not Regulated

Alteration of any information contained herein without written permission from the manufacturer is strictly prohibited.

HMIS/NFPA HAZARD INDEX

- 0 - Minimal
- 1 - Slight
- 2 - Moderate
- 3 - Serious
- 4 - Severe

* - Additional Hazard

GHS HAZARD INDEX

Category 1 - Most Severe

Category 5 - Least Severe

**** End of Document ****