SAFETY DATA SHEET
Thiox – Thiourea Dioxide

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: Thiox
Supplier: PRO Chemical & Dye
126 Shove Street
Fall River, MA  02724
Phone: 508-676-3838
Emergency Phone: 800-255-3924 ChemTel. (United States)
+ 1  01  813-248-0585 (Outside the United States)

SECTION 2: HAZARDS IDENTIFICATION

Statement of Hazard: Irritant, Respiratory irritant, Self-heating substance
Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system. May be harmful by ingestion, skin absorption and inhalation.
Chronic Health Hazard: Not Available

NFPA Rating:
H: 2  F: 0  P: 3

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Acute toxicity, dermal (Category 4), H312
Acute toxicity, inhalation (Category 4), H332
Acute toxicity, oral (Category 4), H302
Self-heating; substances and mixtures (Category 1), H251
Serious eye damage/eye irritation (Category 2A), H319
Skin corrosion/irritation (Category 2), H315
Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3), H335
Pictogram:

Signal Word: Danger

Hazard Statement(s):
- H251 Self-heating; may catch fire.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.

Precautionary Statement(s):
- P235+P410 Keep cool. Protect from sunlight.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
- P302+P352 IF ON SKIN: wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P332+P313 IF SKIN irritation occurs: Get medical advice/attention.
- P420 Store away from other materials.

SECTION 3: COMPOSITION/INFORMATION on INGREDIENTS

Chemical Name: Thiourea Dioxide

CAS Number: 1758-73-2

MOL Number: MFCD00002397

EINECS Number: 217-157-8

Beilstein Registry Number: 506653

Molecular Formula: H₂NC(=NH)SO₂H

Molecular Weight: 108.12

Content: As specified in product name.

SECTION 4: FIRST AID MEASURES
**Eye Contact:**
Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.

**Skin Contact:**
Wash skin with soap and water. If irritation persists, seek medical attention.

**Ingestion:**
Do not induce vomiting. Seek medical attention.

**Inhalation:**
Move to a fresh air environment. Contact a physician if breathing becomes difficult.

### SECTION 5: FIRE FIGHTING MEASURES

- **Flash Point (°C):** Not Available
- **Explosion Limits:** Not Available
- **Auto Ignition Temperature (°C):** Not Available
- **Extinguishing Media:** Carbon dioxide, dry chemical powder, alcohol-resistant foam, or water spray
- **Protective Equipment:** Wear self-contained respirator and fully protective impervious suit.
- **Specific Hazards:** May emit hazardous fumes under fire conditions.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Protection:** Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Remove from ignition sources if safe to do so. Follow emergency response plan and contact proper authorities if needed. Keep unprotected persons away.
- **Environmental Protection:** Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

### SECTION 7: HANDLING and STORAGE

- **Handling and Storage:** Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away. Store in a tightly closed container in a dry, well-ventilated place.
- **Sensitivities:** Light, Moisture
- **Storage Temperature (°C):** 15 to 30
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use product in a well ventilated area or under a fume hood. Use proper lab equipment while handling this product. Keep away from incompatible materials for possible risk of hazardous reaction.

Eye Protection: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash station in your vicinity.

Skin Protection: Wear impervious gloves and protective clothing.

Respiratory Protection: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.

Exposure Limits:

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SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

Appearance: Light yellow crystalline solid

Odor: Not Available

Odor Threshold: Not Available

Flash Point (°C): Not Available

Auto Ignition Temperature (°C): Not Available

UEL% by Volume: Not Available

LEL% by Volume: Not Available

Melting Point (°C): 124-126

Boiling Point (°C): Not Available

Decomposition Temperature (°C): 126

Evaporation Rate: Not Available

pH Value: 4 at 10 g/l
Density (g/cm³): 1.68
Refractive Index (n²°D): Not Available
Viscosity: Not Available
Solubility in Water: Soluble
Solubility in Other: Not Available
Vapor Pressure (mmHg): Not Available
Vapor Density (Air= 1): Not Available

SECTION 10: STABILITY and REACTIVITY

Stability: Stable under normal temperatures and pressures.
Incompatibility: Not Available
Reactivity: Product may react with incompatible materials to release other hazardous substances.
Conditions to Avoid: Heat, flame, sparks, other ignition sources.
Hazardous Decomposition Products: Carbon oxides, Nitrogen oxides, Sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

RTECS Reference: PB0372500
Target Organs: Not Available
Toxicity Data:
- Oral Rat LD50 mg/kg: 1120.00
- Dermal Rabbit LD50 mg/kg: 2000.00
Carcinogenicity:
- National Toxicology Program (NTP) listed: Not Available
- International Agency for Research on Cancer (IARC) listed: Not Available
Potential Symptoms: Not Available

SECTION 12: ECOLOGICAL INFORMATION
Toxicity:

Water flea LC50: 390.00 mg/l - 390.00 hrs.
Green Algae LC50: 32.00 mg/l - 72 hrs.

SECTION 13: DISPOSAL CONSIDERATIONS
Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Thiourea Dioxide
DOT UN Number: UN3341
DOT Hazard Class: Class 4.2
DOT Packing Group: PGII
IMDG Shipping Name: Thiourea Dioxide
IMDG UN Number: UN3341
IMDG Hazard Class: Class 4.2
IMDG Packing Group: PGII
Marine Pollutant: No
IATA Shipping Name: Thiourea Dioxide
IATA UN Number: UN3341
IATA Hazard Class: Class 4.2
IATA Packing Group: PGII

SECTION 15: REGULATORY INFORMATION

United States
Toxic Substance Control Act (TSCA) listed: Yes
Superfund Amendments and Reauthorization Act (SARA 302) listed: No
Superfund Amendments and Reauthorization Act (SARA 311/312) listed: No
Superfund Amendments and Reauthorization Act (SARA 313) listed: No
European Union
European Inventory of Existing Chemical Substances (EINECS): 217-157-8

Canada
Canadian Domestic Substances List (DSL) listed: Yes
Canadian Non-Domestic Substances List (NDSL) listed: No

SECTION 16: OTHER INFORMATION
Date Prepared: 10/1/2018

The information above is presented in good faith. It is believed to be accurate and represents the best information currently available to us. However, we make no warranty with respect to such information and we assume no liability resulting from its use. The user should consider this information as a supplement to other information that may be available and make independent judgement to ensure proper use to protect the health and safety of employees and the environment. This company shall not be held liable for any damage resulting from handling or from contact with the above product.