

Revision number: 4 Revision date: 08/15/2016

1. IDENTIFICATION

Product name: Product code: p-Tolylthiourea T0656

Product use: Restrictions on use:

Company:

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2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:

Acute Toxicity - Oral [Category 3]

Signal word:

Toxic if swallowed

Danger!

Pictogram(s) or Symbol(s):

Hazard Statement(s):



Precautionary Statement(s): [Prevention] [Response] [Storage] [Disposal]

Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. If swallowed: Immediately call a poison center or doctor. Rinse mouth. Store locked up. Dispose of contents and container in accordance with US EPA guidelines for the classification and determination of hazardous waste listed in 40 CFR 261.3. (See Section 13)

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substance/Mixture: Components: | Substance p-Tolylthiourea |
|-----------------------------------|---|
| Percent: | >98.0%(HPLC) |
| CAS Number: | 622-52-6 |
| Molecular Weight: | 166.24 |
| Chemical Formula: | C ₈ H ₁₀ N ₂ S |

4. FIRST-AID MEASURES

For laboratory research purposes. Not for drug or household use.

TCI AMERICA

SAFETY DATA SHEET

| Emergency telephone number: |
|--|
| Chemical Emergencies: |
| TCI America (8:00am - 5:00pm) PST |
| +1-503-286-7624 |
| Transportation Emergencies: |
| Chemtrec 24-Hour |
| +1-800-424-9300 (U.S.A.) |
| +1-703-527-3887 (International) |
| Responsible department: |
| TCI America |
| Environmental Health Safety and Security |
| +1- 503-286-7624 |
| |

| 4. FIRST-AID MEASURES | | | |
|---|---|--|--|
| Inhalation: | Immediately call a poison center or doctor. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take | | |
| Skin contact: | precautions to protect themselves. Immediately call a poison center or doctor. Remove and wash contaminated clothing before re-use. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and | | |
| Eye contact: | take precautions to protect themselves. If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper eyelids. If eye irritation persists get medical advice/attention. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical | | |
| Ingestion: | personnel are aware of the material(s) involved and take precautions to protect themselves. Toxic if swallowed. If swallowed, seek medical advice immediately and show the container or label. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. | | |
| Symptoms/effects: | | | |
| Acute: Delayed: | No data available No data available | | |
| Immediate medical attention: | WARNING: It might be dangerous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is toxic. If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. | | |
| 5. FIRE-FIGHTING MEASURES | | | |
| Suitable extinguishing media: | Dry chemical, CO₂ or water spray. Consult with local fire authorities before attempting large scale fire fighting operations. | | |
| Specific hazards arising from the chen Hazardous combustion products: Other specific hazards: | ical These products include: Carbon oxides Nitrogen oxides Sulfur oxides Closed containers may explode from heat of a fire. | | |
| heated. Move containers from fire area if Special protective equipment for fire-fi Wear positive pressure self-contained bre | | | |
| 6. ACCIDENTAL RELEASE MEASU | IRES | | |
| Personal precautions: | Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn | | |
| Personal protective equipment: | unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Safety glasses. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile). | | |
| Emergency procedures: | Prevent dust cloud. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and excercise caution. Do not touch damaged containers or spilled material unless wearing | | |

Methods and materials for containment and cleaning up: ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material. Environmental precautions:

Keep away from living quarters. Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

7. HANDLING AND STORAGE

| 7. HANDLING AND STORAGE | |
|--------------------------------|---|
| Precautions for safe handling: | Avoid inhalation of vapor or mist. Do not ingest. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition. |
| Conditions for safe storage: | Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. |
| Storage incompatibilities: | Combustible substances, Store away from oxidizing agents |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:

No data available

Appropriate engineering controls:

Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

| Personal protective equipment | |
|-------------------------------|---|
| Respiratory protection: | Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. |
| Hand protection: | Wear protective gloves. |
| Eye protection: | Safety glasses. |
| Skin and body protection: | Lab coat. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state (20°C): Form: Color: Odor: Odor threshold: | Solid Crystal - Powder White - Almost white No data available No data available | | | |
|--|---|--|---------------|--|
| Melting point/freezing point: Boiling point/range: Decomposition temperature: Relative density: Kinematic Viscosity: | 180°C (356°F) No data available No data available No data available No data available | pH: Vapor pressure: Vapor density: Dynamic Viscosity: | | No data available No data available No data available No data available |
| Partition coefficient: n-octanol/water (log P _{ow}) | No data available | Evaporation rate: (Butyl Acetate = 1) | | No data available |
| Flash point: Flammability (solid, gas): | No data available No data available | Autoignition temperatu Flammability or explosi Lower: No | | No data available able |
| | | Upper: No | o data availa | able |

Solubility(ies): Slightly soluble: Hot methanol

10. STABILITY AND REACTIVITY

Reactivity: Chemical Stability: Possibility of Hazardous Reactions: Conditions to avoid: Incompatible materials: Hazardous Decomposition Products: Not Available. Stable under recommended storage conditions. (See Section 7) No hazardous reactivity has been reported. Avoid excessive heat and light. Oxidizing agents No data available

11. TOXICOLOGICAL INFORMATION

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|---|---|--|
| Acute Toxicity: orl-rbt LD50:100 mg/kg | orl-rat LDLo:5 mg/kg | |
| Skin corrosion/irritation: No data available | | |
| Serious eye damage/irritation: No data available | | |
| Respiratory or skin sensitization: No data available | | |
| Germ cell mutagenicity: No data available | | |
| Carcinogenicity: | | |
| No data available | | |
| IARC: No data available | NTP: No data available OSHA: No data available | |
| Reproductive toxicity: No data available | | |
| Routes of Exposure: Symptoms related to exposure: Overexposure may result in serious ill Potential Health Effects: No specific information available; skin Target organ(s): | Inhalation, Eye contact, Ingestion. ness or death. and eye contact may result in irriatation. May be harmful if inhaled or ingested. No data available | |
| 12. ECOLOGICAL INFORMATIC | N | |
| Ecotoxicity | | |
| Fish: | No data available | |
| Crustacea: Algae: | No data available No data available | |
| Persistence and degradability: Bioaccumulative potential (BCF): Mobillity in soil: Partition coefficient: n-octanol/water (log Pow) Soil adsorption (Koc): Henry's Law: constant (PaM ³ /mol) | No data available No data available No data available No data available No data available No data available | |
| | | |
| 13. DISPOSAL CONSIDERATIO Disposal of product: | NS Recycle to process if possible. It is the generator's responsibility to comply with Federal, State | and Local |
| Disposal of product: Disposal of container: Other considerations: | Recycle to process it possible. It is the generator's responsibility to comply with Federal, State a rules and regulations. You may be able to dissolve or mix material with a combustible solvent a chemical incinerator equipped with an afterburner and scrubber system. This section is intende assistance but does not replace these laws, nor does compliance in accordance with this sector regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environm water ways, or the soil. Dispose of as unused product. Do not re-use empty containers. Observe all federal, state and local regulations when disposing of the substance. | and burn in a ed to provide on ensure Hazardous |
| 14. TRANSPORT INFORMATION | v | |
| | | |
| DOT (US)UN number:Proper ShippiUN2811Toxic solids, or | | |

IATA

| JN number: | <u>T INFORMATION</u> Proper Shipping Name | | Class or Division: | Packing Group: | |
|-------------------------------------|--|----------------------------|---------------------------|---|--------|
| JN2811 | Toxic solid, oxidizing, n.o | | 6.1 Toxic material. | II | |
| MDG | | | | | |
| JN number: | Proper Shipping Name | | Class or Division: | Packing Group: | |
| JN2811 | Toxic solid, organic, n.o. | S. | 6.1 Toxic material. | II | |
| mS number: | F | -A, S-A | | | |
| 5. REGULATO | RY INFORMATION | | | | |
| oxic Substance | Control Act (TSCA 8b.): | | | | |
| his product is NC roducts not on th | | ces Control Act (T | SCA) inventory. The follo | wing notices are required by 40 CFR 720.36 (C) for the | se |
| | s are supplied solely for use in | n research and dev | velopment by or under the | e supervision of a technically qualified individual as defi | ned ir |
| | | been fully determir | ned. Any information that | is or becomes available will be supplied on a SDS she | et. |
| JS Federal Regu | lations | | | | |
| CERCLA Hazardo SARA 313 | bus substance and Reporta | ble Quantity: ot Listed | | | |
| SARA 302 | | lot Listed | | | |
| State Regulation | <u>8</u> | | | | |
| State Right-to-Kn | ow | | | | |
| Massachu | | ot Listed | | | |
| New Jerse | 2 | ot Listed | | | |
| Pennsylva California Propos | | ot Listed lot Listed | | | |
| Other Information | ı | | | | |
| IFPA Rating: | | | HMIS Classification: | | |
| Health: | 2 | | Health: | 2 | |
| Flammability: | | | Flammability: | 0 | |
| Instability: | 0 | | Physical: | 0 | |
| nternational Inve | entories | | | | |
| | | | sing immediate and seriou | us toxic effects. (Toxic) | |
| VHMIS hazard cl EC-No: | 2 | 10-740-8 | | | |

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TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective gogles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.