

MATERIAL SAFETY DATA SHEET  
Thiourea

### Section 1 - Chemical Product and Company Identification

<b>MSDS Name:</b>	Thiourea
<b>Catalog Numbers:</b>	42454-0000, 42454-0010, 42454-2500
<b>Synonyms:</b>	Thiocarbamide
<b>Company Identification:</b>	Acros Organics BVBA Janssen Pharmaceuticaaan 3a 2440 Geel, Belgium
<b>Company Identification: (USA)</b>	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
<b>For information in the US, call:</b>	800-ACROS-01
<b>For information in Europe, call:</b>	+32 14 57 52 11
<b>Emergency Number, Europe:</b>	+32 14 57 52 99
<b>Emergency Number US:</b>	201-796-7100
<b>CHEMTREC Phone Number, US:</b>	800-424-9300
<b>CHEMTREC Phone Number, Europe:</b>	703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
62-56-6	Thiourea	99+%	200-543-5

**Hazard Symbols:** XN N



**Risk Phrases:** 22 40 51/53 63

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Harmful if swallowed. Limited evidence of a carcinogenic effect. Possible risk of harm to the unborn child. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*

#### Potential Health Effects

- Eye:** May cause eye irritation. Causes redness and pain.
- Skin:** May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be harmful if absorbed through the skin.
- Ingestion:** Harmful if swallowed. May cause nausea and vomiting.
- Inhalation:** May cause respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May be harmful if inhaled.
- Chronic:** May cause bone marrow abnormalities with damage to blood forming tissues. Possible risk

of harm to the unborn child. Limited evidence of a carcinogenic effect. May impair fertility.

#### Section 4 - First Aid Measures

- Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed.
- Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:** Get medical aid immediately. Wash mouth out with water.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:**

#### Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.
- Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

#### Section 6 - 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. Avoid generating dusty conditions. Do not let this chemical enter the environment.

#### Section 7 - Handling and Storage

- Handling:** Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Use only in a chemical fume hood.
- Storage:** Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container.

#### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

CAS# 62-56-6:

Netherlands: 0.5 mg/m<sup>3</sup> MAC

**Personal Protective Equipment**

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9 - Physical and Chemical Properties

**Physical State:** Crystalline powder

**Color:** white

**Odor:** odorless  
**pH:** Not available  
**Vapor Pressure:** Not available  
**Viscosity:** Not available  
**Boiling Point:** Not available  
**Freezing/Melting Point:** 171 - 175 deg C  
**Autoignition Temperature:** 440 deg C ( 824.00 deg F)  
**Flash Point:** Not available  
**Explosion Limits: Lower:** Not available  
**Explosion Limits: Upper:** Not available  
**Decomposition Temperature:** Not available  
**Solubility in water:** 13.6 g/100ml (20°C)  
**Specific Gravity/Density:**  
**Molecular Formula:** CH4N2S  
**Molecular Weight:** 76.12

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Incompatible materials, temperatures above 140°C.  
**Incompatibilities with Other Materials:** Strong oxidizing agents, strong acids, strong bases, acrolein, nitric acid, hydrogen peroxide.  
**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide.  
**Hazardous Polymerization:** Will not occur.

### Section 11 - Toxicological Information

**RTECS#:** CAS# 62-56-6: YU2800000  
**LD50/LC50:** RTECS:  
**CAS# 62-56-6:** Draize test, rabbit, eye: 14%;  
 Oral, rat: LD50 = 125 mg/kg;  
 Other: Oral, rabbit: LD0 = 6985 mg/kg  
**Carcinogenicity:** Thiourea - California: carcinogen, initial date 1/1/88 NTP: Suspect carcinogen IARC: Group 3 (not classifiable)  
**Other:** See actual entry in RTECS for complete information. Possible teratogen.

### Section 12 - Ecological Information

**Ecotoxicity:** Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

	IATA	IMO	RID/ADR
<b>Shipping Name:</b>	TOXIC SOLID, ORGANIC, N.O.S.*	TOXIC SOLID, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S.
<b>Hazard Class:</b>	6.1	6.1	6.1
<b>UN Number:</b>	2811	2811	2811
<b>Packing Group:</b>	III	III	III

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN N

Risk Phrases:

R 22 Harmful if swallowed.

R 40 Limited evidence of a carcinogenic effect.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 63 Possible risk of harm to the unborn child.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 62-56-6: 2

Canada

CAS# 62-56-6 is listed on Canada's DSL List

### US Federal

TSCA

CAS# 62-56-6 is listed on the TSCA Inventory.

## Section 16 - Other Information

**MSDS Creation Date:** 7/16/1996

**Revision #2 Date** 7/20/2006

**Revisions were made in Sections:** 1, 2, 3, 6, 9, 11, 14

*The information above is believed to be accurate and represents the best information currently available to us. 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 event shall the company 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 howsoever arising, even if the company has been advised of the possibility of such damages.*

-----