MSDS Number: **A6276** * * * * * *Effective Date:* ***05/17/01*** * * * * * *Supercedes:* ***06/30/98***

MSDS **Material Safety Data Sheet**

From: **Mallinckrodt Baker, Inc.**
222 Red School Lane
Phillipsburg, NJ 08865

Mallinckrodt CHEMICALS J.T.Baker

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

AMMONIUM THIOCYANATE

1. Product Identification

Synonyms: Ammonium sulfocyanide; ammonium rhodanide; thiocyanic acid, ammonium salt; ammonium sulfocyanate
CAS No.: 1762-95-4
Molecular Weight: 76.12
Chemical Formula: NH4SCN
Product Codes:
J.T. Baker: 0818, 0823
Mallinckrodt: 3544

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Ammonium Thiocyanate	1762-95-4	> 98%	Yes

3. Hazards Identification

Emergency Overview

WARNING! HARMFUL IF SWALLOWED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 1 - Slight
Reactivity Rating: 1 - Slight
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:
Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
Ingestion:
May cause vomiting, disorientation, weakness, low blood pressure, convulsions and death which may be delayed. The probable lethal dose is between 15-30 grams.
Skin Contact:
Causes irritation to skin. Symptoms include redness, itching, and pain.
Eye Contact:
Causes irritation, redness, and pain.
Chronic Exposure:
Prolonged or repeated skin exposure may cause dermatitis. Repeated ingestion of small amounts may cause hives, abnormal bleeding, weight loss, mental effects, and an enlarged thyroid.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

Get medical attention immediately.

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5. Fire Fighting Measures

Fire:
Not considered a fire hazard, but fire may decompose ammonium thiocyanate to form toxic gases more hazardous than ammonium thiocyanate itself.
Explosion:
Not considered to be an explosion hazard.
Fire Extinguishing Media:
Water spray, dry chemical, alcohol foam, or carbon dioxide.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

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7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from oxidizing materials. Store in the dark. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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9. Physical and Chemical Properties

Appearance:
Colorless, deliquescent crystals.

Odor:
Odorless to slight ammonia odor.

Solubility:
128g/100g water @ 0C (32F).

Specific Gravity:
1.31

pH:
No information found.

% Volatiles by volume @ 21C (70F):
0

Boiling Point:
170C (338F) Decomposes (anhydrous).

Melting Point:
150C (302F)

Vapor Density (Air=1):
No information found.

Vapor Pressure (mm Hg):
No information found.

Evaporation Rate (BuAc=1):
No information found.

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10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage. Slowly decomposes on exposure to light.

Hazardous Decomposition Products:
Emits toxic fumes of ammonia, nitric oxides, sulfur oxides, thiocyanates, and cynanide when heated to decomposition.

Hazardous Polymerization:
Will not occur.

Incompatibilities:
Lead nitrate, chlorates, nitrates, nitric acid, organic peroxides, oxidizing agents, peroxides, sodium chlorate, and

potassium chlorate. Reacts with acid to liberate toxic hydrogen cyanide.
Conditions to Avoid:
Heat, flames, ignition sources and incompatibles.

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11. Toxicological Information

Oral Rat LD50: 750 mg/kg.

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--------\Cancer Lists\-------------------------------------------------------
                                          ---NTP Carcinogen---
Ingredient                                Known    Anticipated    IARC Category
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Ammonium Thiocyanate (1762-95-4)         No          No             None
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12. Ecological Information

Environmental Fate:
This material is not expected to significantly bioaccumulate.
Environmental Toxicity:
No information found.

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13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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14. Transport Information

Not regulated.

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15. Regulatory Information

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--------\Chemical Inventory Status - Part 1\----------------------------------
Ingredient                                        TSCA  EC   Japan  Australia
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 Ammonium Thiocyanate (1762-95-4)                 Yes  Yes   Yes      Yes

 --------\Chemical Inventory Status - Part 2\--------------------------------
                                                        --Canada--
 Ingredient                                     Korea  DSL   NDSL  Phil.
 ----------------------------------------------  -----  ---   ----  -----
 Ammonium Thiocyanate (1762-95-4)                 Yes   Yes   No     Yes

 --------\Federal, State & International Regulations - Part 1\----------------
                                            -SARA 302-    ------SARA 313------
 Ingredient                                 RQ    TPQ     List  Chemical Catg.
 ----------------------------------------  ---   -----   ----  --------------
 Ammonium Thiocyanate (1762-95-4)           No    No      No         No

 --------\Federal, State & International Regulations - Part 2\----------------
                                                         -RCRA-    -TSCA-
 Ingredient                                 CERCLA     261.33     8(d)
 ----------------------------------------  ------     ------    ------
 Ammonium Thiocyanate (1762-95-4)           5000       No         No


Chemical Weapons Convention:  No     TSCA 12(b):  No     CDTA:  No
SARA 311/312:  Acute: Yes      Chronic: Yes  Fire: No  Pressure: No
Reactivity: No          (Pure / Solid)
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Australian Hazchem Code: None allocated.
Poison Schedule: S5
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health: **2** Flammability: **1** Reactivity: **1**
Label Hazard Warning:
WARNING! HARMFUL IF SWALLOWED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
Label Precautions:
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Avoid breathing dust.
Keep container closed.
Use only with adequate ventilation.
Label First Aid:
In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as

directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

No changes.

Disclaimer:

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