



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALETIQUE

HOJAS DE DATOS  
DE SEGURIDAD

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.

T2925 -03  
Effective: 03/09/92

Thionin

Page: 1  
Issued: 07/10/93

J.T.BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

Product Name: Thionin  
Common Synonyms: C.I. 52000; Lauths Violet; 3,7-Diamino-5-phenothiazinium Chloride  
Chemical Family: Dyes, Stains, and Indicators  
Formula:  $C_{12}H_{10}ClN_3S$   
Formula Wt.: 263.75  
CAS No.: 581-64-6  
NIOSH/RTECS No.: SN5425000  
Product Use: Laboratory Reagent  
Product Codes: U830

PRECAUTIONARY LABELING

BAKER SAF-T-DATA\* System

HEALTH <b>2</b> MODERATE	FLAMMABILITY <b>1</b> SLIGHT	REACTIVITY <b>1</b> SLIGHT	CONTACT <b>2</b> MODERATE
--------------------------------	------------------------------------	----------------------------------	---------------------------------

Laboratory Protective Equipment

 GOGGLES	 LAB COAT	 VENT HOOD	 PROPER GLOVES
-------------	--------------	---------------	-------------------

U.S. Precautionary Labeling

CAUTION!  
CAUSES IRRITATION. MAY BE HARMFUL IF SWALLOWED.  
Avoid contact with eyes, skin, clothing. Keep in tightly closed container.  
Wash thoroughly after handling.



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.**

T2925 -03  
Effective: 03/09/92

Thionin

Page: 2  
Issued: 07/10/93

=====

PRECAUTIONARY LABELING (CONTINUED)

=====

International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.

SAF-T-DATA\* Storage Color Code: Orange (general storage)

=====

SECTION II - COMPONENTS

=====

<u>Component</u>	<u>CAS No.</u>	<u>Weight %</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
Thionin	581-64-6	90-100	N/E	N/E

=====

SECTION III - PHYSICAL DATA

=====

Boiling Point: N/A	Vapor Pressure (mmHg): N/A
Melting Point: N/A	Vapor Density (air=1): N/A
Specific Gravity: N/A (H <sub>2</sub> O=1)	Evaporation Rate: N/A
Solubility(H <sub>2</sub> O): Moderate (1-10%)	% Volatiles by Volume: 0 (21°C)
pH: N/A	
Odor Threshold (ppm): N/A	Physical State: Solid
Coefficient Water/Oil Distribution: N/A	
Appearance & Odor: Dark green needle-like crystals.	



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.

T2925 -03  
Effective: 03/09/92

Thionin

Page: 3  
Issued: 07/10/93

=====  
SECTION IV - FIRE AND EXPLOSION HAZARD DATA  
=====

Flash Point (Closed Cup): N/A

Autoignition Temperature: N/A

Flammable Limits: Upper - N/A Lower - N/A

Fire Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Special Fire-Fighting Procedures

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.

Unusual Fire & Explosion Hazards

None identified.

Toxic Gases Produced

hydrogen chloride, oxides of nitrogen, sulfur dioxide, carbon monoxide, carbon dioxide

Explosion Data-Sensitivity to Mechanical Impact

None identified.

Explosion Data-Sensitivity to Static Discharge

None identified.

=====  
SECTION V - HEALTH HAZARD DATA  
=====

Threshold Limit Value (TLV/TWA): Not Established

Short-Term Exposure Limit (STEL): Not Established

Permissible Exposure Limit (PEL): Not Established

Toxicity of components

Intravenous Mouse LD<sub>50</sub> for Thionin

400 mg/kg

Carcinogenicity: NTP: No IARC: No Z List: No OSHA Reg: No



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE:** CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.

T2925 -03  
Effective: 03/09/92

Thionin

Page: 4  
Issued: 07/10/93

=====  
SECTION U - HEALTH HAZARD DATA (CONTINUED)  
=====

Carcinogenicity  
None identified.

Reproductive Effects  
None identified.

Effects of Overexposure

INHALATION: none identified  
SKIN CONTACT: irritation  
EYE CONTACT: irritation  
SKIN ABSORPTION: none identified  
INGESTION: may be harmful  
CHRONIC EFFECTS: none identified

Target Organs  
none identified

Medical Conditions Generally Aggravated by Exposure  
none identified

Primary Routes of Entry  
ingestion, skin contact, eye contact

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If swallowed, if conscious, immediately induce vomiting.  
INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  
SKIN CONTACT: In case of contact, flush skin with water.  
EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.**

T2925 -03  
Effective: 03/09/92

Thionin

Page: 5  
Issued: 07/10/93

=====

SECTION V - HEALTH HAZARD DATA (CONTINUED)

=====

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: No Pressure: No Reactivity: No

Extremely Hazardous Substance: No  
CERCLA Hazardous Substance: No  
SARA 313 Toxic Chemicals: No  
TSCA Inventory: Yes

=====

SECTION VI - REACTIVITY DATA

=====

Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: none documented

Incompatibles: none identified

Decomposition Products: hydrogen chloride, oxides of nitrogen, oxides of sulfur, carbon monoxide, carbon dioxide

=====

SECTION VII - SPILL & DISPOSAL PROCEDURES

=====

Steps to be Taken in the Event of a Spill or Discharge

Wear self-contained breathing apparatus and full protective clothing. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

Disposal Procedure

Dispose in accordance with all applicable federal, state, and local environmental regulations.

=====

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

=====

Ventilation: Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.

Respiratory Protection: None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.**

T2925 -03  
Effective: 03/09/92

Thionin

Page: 6  
Issued: 07/10/93

=====  
SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT (CONTINUED)  
=====

Eye/Skin Protection: Safety goggles, uniform, rubber gloves arerecommended.

=====  
SECTION IX - STORAGE AND HANDLING PRECAUTIONS  
=====

SAF-T-DATA\* Storage Color Code: Orange (general storage)

Storage Requirements

Keep container tightly closed. Suitable for any general chemical storage area.

=====  
SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION  
=====

Domestic (D.O.T.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

International (I.M.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)  
Marine Pollutants: No

AIR (I.C.A.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

U.S. Customs Harmonization Number: 32041600000

N/A = Not Applicable or Not Available  
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and

Continued on Page: 7

0020



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

**MATERIAL SAFETY DATA SHEET**

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE:** CHEMTREC, CANUTEC and National Response Center emergency numbers are 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-JTBAKER) for assistance.

T2925 -03  
Effective: 03/09/92

Thionin

Page: 7  
Issued: 07/10/93

=====  
face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are 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-JTBAKER) for assistance.

---  
COPYRIGHT 1993 J.T.BAKER INC.  
\* TRADEMARKS OF J.T.BAKER INC.

====  
Approved by Quality Assurance Department.