

MATERIAL SAFETY DATA SHEET

THIONIN
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 21/06/06

PRODUCT IDENTIFICATION

PRODUCT NAME: THIONIN (C.I. 52000)
COMMON SYNONYMS: C.I. 52000; LAUTHS VIOLET; 3,7-DIAMINO-5-PHENOTHIAZINIUM
CHLORIDE
CHEMICAL FAMILY: DYES, STAINS, AND INDICATORS
FORMULA: C₁₂H₁₀CLN₃S
FORMULA WT.: 263.75
CAS NO.: 581-64-6
NIOSH/RTECS NO.: SN5425000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: V830

CHEMTREC # (800) 424-9300 NATIONAL RESPONSE CENTER # (800) 424-8802
J.T.BAKER INC. 222 RED SCHOOL LANE PHILLIPSBURG, NJ 08865 24-HOUR
EMERGENCY TELEPHONE -- (201) 859-2151

EFFECTIVE: 01/04/94 ISSUED: 04/08/95
REVISION #03

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* SYSTEM

| | | | |
|--------------|---|---|----------|
| HEALTH | - | 2 | MODERATE |
| FLAMMABILITY | - | 1 | SLIGHT |
| REACTIVITY | - | 1 | SLIGHT |
| CONTACT | - | 2 | 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.

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)

COMPONENTS

| COMPONENT | CAS NO. | WEIGHT % | OSHA/PEL |
|-----------|----------|----------|----------|
| ACGIH/TLV | | | |
| THIONIN | 581-64-6 | 90-100 | N/E N/E |

PHYSICAL DATA

BOILING POINT: N/A VAPOR PRESSURE (MMHG): N/A

MATERIAL SAFETY DATA SHEET

THIONIN
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 21/06/06

MELTING POINT: N/A VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: N/A EVAPORATION RATE: N/A
(H2O=1)
SOLUBILITY(H2O): MODERATE (1-10%) % VOLATILES BY VOLUME: 0
(21 C)
PH: N/A
ODOR THRESHOLD (P.P.M.): N/A PHYSICAL STATE: SOLID
COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: DARK GREEN NEEDLE-LIKE CRYSTALS.

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.

HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV/TWA): NOT ESTABLISHED

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

MATERIAL SAFETY DATA SHEET

THIONIN
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 21/06/06

TOXICITY OF COMPONENTS

INTRAVENOUS MOUSE LD50 FOR THIONIN 400
MG/KG

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

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. PROMPT ACTION IS ESSENTIAL.

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.

MATERIAL SAFETY DATA SHEET

THIONIN
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 21/06/06

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

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

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.

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.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, RUBBER GLOVES ARE RECOMMENDED.

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.

TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

MATERIAL SAFETY DATA SHEET

THIONIN
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 21/06/06

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

NOTE: WHEN HANDLING LIQUID PRODUCTS, SECONDARY PROTECTIVE CONTAINERS MUST BE USED FOR CARRYING. 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 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 ASSISTANCE. COPYRIGHT 1995 J.T.BAKER INC. * TRADEMARKS OF J.T.BAKER INC. APPROVED BY QUALITY ASSURANCE DEPARTMENT.