

J.T.BAKER INC. 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865

M A T E R I A L S A F E T Y D A T A S H E E T

24-HOUR EMERGENCY TELEPHONE -- (908) 859-2151

CHEMTREC # (800) 424-9300 -- NATIONAL RESPONSE CENTER # (800) 424-8802

S6434 M05

STANNOUS CHLORIDE, DIHYDRATE

PAGE: 1

EFFECTIVE: 01/04/94

ISSUED: 01/15/94

J.T.BAKER INC., 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: STANNOUS CHLORIDE, DIHYDRATE  
COMMON SYNONYMS: TIN (II) CHLORIDE, DIHYDRATE; TIN DICHLORIDE, DIHYDRATE  
CHEMICAL FAMILY: TIN COMPOUNDS  
FORMULA:  $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$   
FORMULA WT.: 225.63  
CAS NO.: 10025-69-1  
NIOSH/RTECS NO.: XP8700000  
PRODUCT USE: LABORATORY REAGENT  
PRODUCT CODES: 3986, 3980

PRECAUTIONARY LABELING

BAKER SAF-T-DATA\* SYSTEM

|              |   |   |                    |
|--------------|---|---|--------------------|
| HEALTH       | - | 2 | MODERATE           |
| FLAMMABILITY | - | 0 | NONE               |
| REACTIVITY   | - | 1 | SLIGHT             |
| CONTACT      | - | 3 | SEVERE (CORROSIVE) |

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

WARNING

CAUSES IRRITATION. MAY CAUSE BURNS. HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.

AVOID CONTACT WITH EYES, SKIN, CLOTHING. AVOID BREATHING DUST. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. IN CASE OF FIRE, SOAK WITH WATER. IN CASE OF SPILL, SWEEP UP AND REMOVE. FLUSH SPILL AREA WITH WATER.

INTERNATIONAL LABELING

HARMFUL IF SWALLOWED. CAUSES BURNS. IRRITATING TO RESPIRATORY SYSTEM. AVOID CONTACT WITH SKIN AND EYES.

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PRECAUTIONARY LABELING (CONTINUED)

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SAF-T-DATA\* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

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SECTION II - COMPONENTS

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| <u>COMPONENT</u>             | <u>CAS NO.</u> | <u>WEIGHT %</u> | <u>OSHA/PEL</u> | <u>ACGIH/TLV</u> |
|------------------------------|----------------|-----------------|-----------------|------------------|
| STANNOUS CHLORIDE, DIHYDRATE | 10025-69-1     | 98-100          | 2 MG/M          | 2 MG/M           |

TLV IS FOR TIN, OXIDE & INORGANIC COMPOUNDS, EXCEPT SNH<sub>4</sub>, AS SN. PEL IS FOR TIN, INORGANIC COMPOUNDS, EXCEPT OXIDES, AS SN.

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SECTION III - PHYSICAL DATA

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BOILING POINT: N/A

VAPOR PRESSURE (MMHG): N/A

MELTING POINT: 37 C (98 F)  
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): N/A

SPECIFIC GRAVITY: 2.71  
(H<sub>2</sub>O=1)

EVAPORATION RATE: N/A

SOLUBILITY (H<sub>2</sub>O): APPRECIABLE (>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: WHITE CRYSTALS. ODORLESS.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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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. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS

CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE. NOTE: DECOMPOSES AT MELTING POINT.

TOXIC GASES PRODUCED

HYDROGEN CHLORIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA

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THRESHOLD LIMIT VALUE (TLV/TWA): 2 MG/M

TLV IS FOR TIN, OXIDE AND INORGANIC COMPOUNDS, EXCEPT SNH4, AS SN.

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): 2 MG/M

PEL IS FOR TIN, INORGANIC COMPOUNDS, EXCEPT OXIDES, AS SN.

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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TOXICITY OF COMPONENTS

|                                                             |      |       |
|-------------------------------------------------------------|------|-------|
| ORAL RAT LD50 FOR STANNOUS CHLORIDE, DIHYDRATE              | 700  | MG/KG |
| INTRAPERITONEAL MOUSE LD50 FOR STANNOUS CHLORIDE, DIHYDRATE | 105  | MG/KG |
| INTRAVENOUS MOUSE LD50 FOR STANNOUS CHLORIDE, DIHYDRATE     | 17.8 | MG/KG |
| CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO   |      |       |

CARCINOGENICITY

SOME EXPERIMENTS WITH TEST ANIMALS INDICATED THAT THIS SUBSTANCE MAY BE ANTICIPATED TO BE A CARCINOGEN.

REPRODUCTIVE EFFECTS

NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: IRRITATION OF UPPER RESPIRATORY TRACT, SEVERE IRRITATION OR BURNS OF MUCOUS MEMBRANES

SKIN CONTACT: SEVERE IRRITATION OR BURNS, PROLONGED CONTACT MAY CAUSE SKIN SENSITIZATION

EYE CONTACT: SEVERE IRRITATION OR BURNS

SKIN ABSORPTION: RAPID ABSORPTION

INGESTION: IRRITATION AND BURNS TO MOUTH AND STOMACH, HEADACHE, NAUSEA, VOMITING, DIZZINESS, GASTROINTESTINAL IRRITATION

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS

EYES, SKIN, RESPIRATORY SYSTEM

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY

INHALATION, EYE CONTACT, SKIN CONTACT

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LARGE AMOUNTS OF WATER.

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, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE RE-USE.

EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

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

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SECTION VI - REACTIVITY DATA

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STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, FLAME, MOISTURE

INCOMPATIBLES: BROMINE TRIFLUORIDE AND TRICHLORIDE, NITRATES, ALKALIES, ALCOHOLS, AMMONIA, SODIUM, POTASSIUM, STRONG OXIDIZING AGENTS, CARBIDES

DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE, TIN OXIDE FUME

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SECTION VII - SPILL & DISPOSAL PROCEDURES

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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.

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS UP TO MG/M , A HIGH-EFFICIENCY PARTICULATE RESPIRATOR IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED BREATHING APPARATUS IS ADVISED.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, NEOPRENE GLOVES ARERECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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SAF-T-DATA\* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: CORROSIVE SOLIDS, N.O.S. (STANNOUS CHLORIDE, DIHYDRATE)  
HAZARD CLASS: 8  
UN/NA: UN1759 PACKAGING GROUP: III  
LABELS: CORROSIVE  
REGULATORY REFERENCES: 49CFR 172.101

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: CORROSIVE SOLIDS, N.O.S. (STANNOUS CHLORIDE, DIHYDRATE)  
HAZARD CLASS: 8 I.M.O. PAGE: 8151  
UN: UN1759 MARINE POLLUTANTS: NO PACKAGING GROUP: III  
LABELS: CORROSIVE  
REGULATORY REFERENCES: 49CFR PART 176; IMDG CODE

AIR (I.C.A.O.)

PROPER SHIPPING NAME: CORROSIVE SOLIDS, N.O.S. (STANNOUS CHLORIDE, DIHYDRATE)  
HAZARD CLASS: 8  
UN: UN1759 PACKAGING GROUP: III  
LABELS: CORROSIVE  
REGULATORY REFERENCES: 49CFR PART 175; ICAO=== WE BELIEVE THE TRANSPORTATION  
DATA AND REFERENCES CONTAINED HEREIN TO BE FACTUAL AND  
THE OPINION OF QUALIFIED EXPERTS. THE DATA IS MEANT AS  
A GUIDE TO THE OVERALL CLASSIFICATION OF THE PRODUCT  
AND IS NOT PACKAGE SIZE SPECIFIC, NOR SHOULD IT BE  
TAKEN AS A WARRANTY OR REPRESENTATION FOR WHICH THE  
COMPANY ASSUMES LEGAL RESPONSIBILITY.=== THE  
INFORMATION IS OFFERED SOLELY FOR YOUR CONSIDERATION,  
INVESTIGATION, AND VERIFICATION. ANY USE OF THE  
INFORMATION MUST BE DETERMINED BY THE USER TO BE IN  
ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL  
LAWS AND REGULATIONS. SEE SHIPPER REQUIREMENTS 49CFR  
171.2, CERTIFICATION 172.204, AND EMPLOYEE TRAINING 49  
CFR 173.1(B).

U.S. CUSTOMS HARMONIZATION NUMBER: 28273900002

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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 HEEDDED. 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.

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