

MATERIAL SAFETY DATA SHEET

MANUFACTURER: TAYLOR TECHNOLOGIES, INC
 31 LOVETON CIRCLE
 SPARKS, MD 21152
 TELEPHONE: 410-472-4340

1. PRODUCT IDENTIFICATION

CATALOG NO.: R-0912
 PRODUCT NAME: Total Chelant Titrating Solution
 CHEMICAL FAMILY: Inorganic acid/salt solution

2. INGREDIENTS

INGREDIENT	CAS NO.	%	NATURE OF HAZARD
*Hydrochloric acid	7647-01-0	<2	Irritant acid
Bismuth nitrate	10361-44-1	<1	Irritant
Deionized water	7732-18-5	to 100	None

*This chemical is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.

3. PHYSICAL/CHEMICAL CHARACTERISTICS

STATE: Liquid APPEARANCE: Clear, colorless ODOR: None
 BOILING PT (F): 212 pH: .7 SPECIFIC GRAVITY: 1
 VAPOR PRESSURE (mm Hg): 17 VAPOR DENSITY (AIR=1): .6
 PERCENT VOLATILE BY VOLUME: 99 SOLUBILITY IN WATER: Soluble

4. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT: NA METHOD: NA
 FLAMMABLE LIMITS: LEL: NA UEL: NA
 EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray or foam
 SPECIAL PROCEDURES: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing
 FIRE/EXPLOSION HAZARDS AND HAZARDOUS DECOMPOSITION PRODUCTS: May react with metals to produce hydrogen gas. May emit toxic fumes of hydrogen chloride, chlorine, nitrogen oxides.
 NFPA CODE: Health: 1 Flammability: 0 Reactivity: 0 Specific: ACID
 CONDITIONS TO AVOID: Extreme heat, temperatures. Contact with strong bases, metals, oxidizers.

5. HEALTH HAZARD DATA

INGREDIENT: Hydrochloric acid
 TOXICITY: LD50(oral-rbt): 900 mg/kg LC50(ihl-rat): 3124 ppm/1H
 PEL: 7 mg/m3 (ceiling) TLV: 7 mg/m3 (ceiling)
 STEL: NE

INGREDIENT: Bismuth nitrate
 TOXICITY: NE
 PEL: NE TLV: NE
 STEL: NE

5. HEALTH HAZARD DATA - continued

ROUTE(S) OF ENTRY: Inhalation X Ingestion X Skin X
TARGET ORGAN(S): Eyes, skin, respiratory tract, kidneys
CARCINOGENICITY: NTP No IARC No OSHA No
HEALTH HAZARDS AND SYMPTOMS OF EXPOSURE:
EYES: Irritant. Contact may cause burns.
SKIN: Irritant. Contact may cause burns.
INGESTION: Irritant. May cause moderate to severe gastrointestinal irritation.
INHALATION: Irritant
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, respiratory conditions

6. PRECAUTIONARY MEASURES

PROTECTIVE EQUIPMENT: General purpose gloves, safety glasses, lab coat, adequate ventilation
HANDLING: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.
STORAGE: Cool, dry area. Avoid direct sunlight.

7. EMERGENCY AND FIRST AID PROCEDURES

EYE AND SKIN CONTACT: Immediately flush eyes with water for 15 minutes. Call physician. Wash skin thoroughly with baking soda, soap and water.
INGESTION: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING.
INHALATION: Remove to fresh air. Call physician.

8. SPILL AND DISPOSAL PROCEDURES

SPILL OR RELEASE: Neutralize with soda ash. Absorb with vermiculite or other inert material. Containerize for later disposal.
DISPOSAL: Incineration or other method to comply with all local, state, and federal regulations.

NA = Not applicable
ND = Not determined
NE = Not established

This Material Safety Data Sheet has been prepared in accordance with 29 CFR Part 1910.1200 and contains information believed to be accurate and complete at the date of preparation. However, no warranty is expressed or implied. Advice given under "Spill and Disposal Procedures" assumes compliance with federal, state, and local regulations regarding the disposal of hazardous waste.

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