Material Safety Data Sheet
Chloramine T Trihydrate

ACC# 45371

Section 1 - Chemical Product and Company Identification

MSDS Name: Chloramine T Trihydrate
Catalog Numbers: AC227850000, AC227850010, AC227850250, AC227852500, NC9483232, NC9753904, NES6100-250, O1779 250, O1779-250, O1779250, XXD1779550GM
Synonyms: Benzenesulfonamide, N-Chloro-4-Methyl-, Sodium Salt, Trihydrate; Sodium, (N-Chloro-p-toluenesulfonamido)-, Trihydrate; Tosylchlora
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7080-50-4	Chloramine T Trihydrate	ca. 100	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to yellow crystalline powder.
Danger! Corrosive. Causes eye and skin burns. May cause sensitization by inhalation. Methemoglobin former - can cause cyanosis. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Air sensitive.
Target Organs: Blood, respiratory system, eyes, skin.

Potential Health Effects
Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin burns. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color. May cause skin sensitization based on the its potential as a respiratory sensitizer.
Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. Overexposure may cause methemoglobinemia. May cause systemic effects.
Inhalation: Causes chemical burns to the respiratory tract. Aspiration may lead to pulmonary edema. May cause systemic effects. May cause respiratory sensitization.
Chronic: May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Effects may be delayed.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.
Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Notes to Physician: Absorption of this product into the body may cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Moderate degrees of cyanosis need to be treated only by supportive measures: bed rest and oxygen inhalation. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood. Cleansing of the entire contaminated area of the body is of utmost importance.
Antidote: Methylene blue, alone or in combination with oxygen is indicated as a treatment in nitrite induced methemoglobinemia.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
Flash Point: 278e deg F (136.67 deg C)
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Flush spill area with water. Provide ventilation. Place under an inert atmosphere.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Use with adequate ventilation. Avoid contact with skin and eyes. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not ingest or inhale. Handle under an inert atmosphere. Store protected from air. Discard contaminated shoes.
Storage: Store in a cool, dry place. Keep container closed when not in use. Keep away from water. Keep containers tightly closed. Do not expose to air. Store under an inert atmosphere.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Chloramine T Trihydrate	none listed	none listed	none listed

OSHA Vacated PELs: Chloramine T Trihydrate: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Appearance: white to yellow
Odor: chlorine-like - weak odor
pH: 8.0-10.0 (5%aq. soln)
Vapor Pressure: Not available.
Vapor Density: 0.6
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point:167-177 deg C
Decomposition Temperature: Not available.
Solubility: Reacts with water.
Specific Gravity/Density:1.43
Molecular Formula:C7H7ClNNaO2S.3H2O
Molecular Weight:281.5975

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Air sensitive. Contact with acids liberates toxic gas. Contact with water gives off hypochlorous acid. Has been reported as being explosive after azeotropic distillation (A liquid mixture of two or more substances that retains the same composition in the vapor state as in the liquid state when distilled or partially evaporated under a certain pressure).
Conditions to Avoid: Exposure to air, temperatures above 130°C.
Incompatibilities with Other Materials: Oxidizing agents, acids.
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide, chloride fumes.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 7080-50-4 unlisted.
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 7080-50-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Chloramine T Trihydrate)	No information available.
Hazard Class:	8	
UN Number:	UN3263	
Packing Group:	III	

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7080-50-4 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 7080-50-4 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols:
C
Risk Phrases:
R 22 Harmful if swallowed.
R 31 Contact with acids liberates toxic gas.
R 34 Causes burns.
R 42 May cause sensitization by inhalation.

Safety Phrases:
S 22 Do not breathe dust.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 7 Keep container tightly closed.

WGK (Water Danger/Protection)
CAS# 7080-50-4: No information available.
Canada - DSL/NDSL
None of the chemicals in this product are listed on the DSL or NDSL list.
Canada - WHMIS
This product has a WHMIS classification of D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 5/12/1998
Revision #8 Date: 10/03/2005