







Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
 	Highly toxic; do not ingest or inhale. Combustible material; avoid heat and sources of ignition. Irritating to skin, eyes, and the respiratory system. Lachrymator.	   

Section I. Chemical Product and Company Identification

Chemical Name	Thiocyanic Acid Methyl Ester		
Catalog Number	T0201	Supplier	TGI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	Methyl Thiocyanate		
Chemical Formula	CH ₃ SCN		
CAS Number	556-64-9	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Thiocyanic Acid Methyl Ester	556-64-9	Min 99.0 (GC)	Not available.	Rat LD ₅₀ (oral) 60 mg/kg Mouse LD ₅₀ (intravenous) 18 mg/kg Mouse LD ₅₀ (intraperitoneal) 23 mg/kg

Section III. Hazards Identification

Acute Health Effects	Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Not available. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
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 reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	Flammable.	Auto-Ignition	Not available.
Flash Points	38°C (100.4°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO _x), sulfur oxides (SO ₂ , SO ₃ ...).		
Fire Hazards	WARNING: Very toxic cyanide gas may be produced in a fire. Do not inhale.		
Explosion Hazards	Not available.		
	Risks of explosion of the product in presence of mechanical impact: Not available.		
	Risks of explosion of the product in presence of static discharge: Not available.		

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Emergency phone number (800) 424-9300

Fire Fighting Media
and Instructions

Combustible Liquid.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.

Section VI. Accidental Release MeasuresSpill Cleanup
Instructions

Highly Toxic Material. Combustible Material. Irritating Material. Lachrymator.
Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and StorageHandling and Storage
Information

HIGHLY TOXIC. COMBUSTIBLE. IRRITANT. LACHRYMATOR. Keep locked up.. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Exposure Limits

Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Clear, colorless.)	Solubility	Very Slightly soluble in water. Miscible with Ether, Alcohol.
Specific Gravity	1.08 (water=1)		
Molecular Weight	73.12	Partition Coefficient	Not available.
Boiling Point	130°C (266°F)	Vapor Pressure	Not available.
Melting Point	-5°C (23°F)	Vapor Density	Not available.
Refractive Index	1.468	Volatility	Not available.
Critical Temperature	Not available.	Odor	Onion. (Slight.)
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Avoid excessive heat and light.

Incompatibilities

Reactive with strong oxidizing agents, and water.

Section XI. Toxicological Information

RTECS Number

XL1575000

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Rat LD₅₀ (oral) 60 mg/kg
Mouse LD₅₀ (intravenous) 18 mg/kg
Mouse LD₅₀ (intraperitoneal) 23 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY Not available.
Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Acute Toxic Effects

Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death.
Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

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Emergency phone number (800) 424-9300

Section XII. Ecological Information

Ecotoxicity Not available.

Environmental Fate Methyl thiocyanate's production and use as a chemical and pharmaceutical intermediate may result in its release to the environment. If released to the atmosphere, methyl thiocyanate is expected to exist solely in the vapor phase in the ambient atmosphere based upon a measured vapor pressure of 12 mm Hg at 25 deg C. Vapor-phase methyl thiocyanate will be degraded by reaction with photochemically-produced hydroxyl radicals (estimated half-life 15 days). If released to soil, methyl thiocyanate is expected to have very high mobility based upon the estimated Koc of 8.3. Volatilization from moist and dry soil surfaces may occur given an estimated Henry's Law constant of 4.4×10^{-5} atm-cu m/mole and the measured vapor pressure, respectively. If released into water, methyl thiocyanate is not expected to adsorb to suspended solids and sediments in water based upon its estimated Koc. Methyl thiocyanate is expected to volatilize from water surfaces given its estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 20 hours and 8.6 days, respectively. Bioconcentration of methyl thiocyanate in aquatic organisms is not expected to occur given an estimated BCF of 2.1. Methyl thiocyanate has been estimated to biodegrade fast, with primary biodegradation occurring over a period of weeks. Occupational exposure to methyl thiocyanate may occur through inhalation and dermal contact with this compound at workplaces where it is produced or used.

Section XIII. Disposal Considerations

Waste Disposal Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification DOT CLASS 3: Flammable liquid.
DOT CLASS 6.1: Toxic material.

PIN Number UN1992

Proper Shipping Name Flammable liquid, toxic, n.o.s.

Packing Group (PG) II

DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA) This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.

WHMIS Classification (Canada) On NDSL

EINECS Number (EEC) 209-134-6

EEC Risk Statements R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data Not available.

Section XVI. Other Information**Version 1.0****Validated on 4/29/2005.****Printed 4/29/2005.****Notice to Reader**

TCl laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.