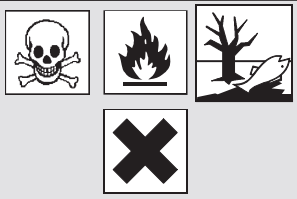
Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**THIS MATERIAL IS TOXIC BY INHALATION** **Highly toxic; do not ingest or inhale. Avoid all contact with this material.** **Combustible material; avoid heat and sources of ignition.** **Environmental hazard.** **Irritating to skin, eyes, and the respiratory system.** **Violent Lachrymator.** **Refrigerate.** **Protect from Light.**	

Section I. Chemical Product and Company Identification

Chemical Name: **Bromoacetone (stabilized with MgO)**

Catalog Number: B0642

Synonym: 2-Propanone, 1-bromo- (9 CI)

Chemical Formula: C_3H_5BrO

CAS Number: 598-31-2

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

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
Bromoacetone (stabilized with MgO)	598-31-2	Min. 90.0 (GC)	Not available.	Not available.

Section III. Hazards Identification

Acute Health Effects

This material is toxic by inhalation. Highly 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: Combustible.

Auto-Ignition: Not available.

Flash Points: 51°C (123.8°F).

Flammable Limits: Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO_2), halogenated compounds.

Fire Hazards: Not available.

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Explosion Hazards	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.
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 Measures

Spill Cleanup Instructions	This material is toxic by inhalation. Highly toxic material. Combustible material. Environmentally hazardous material. Irritating material. Lachrymatory material. 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 Storage

Handling and Storage Information	THIS MATERIAL IS TOXIC BY INHALATION. HIGHLY TOXIC. COMBUSTIBLE. ENVIRONMENTALLY HAZARDOUS. IRRITATING. LACHRYMATORY. REFRIGERATE. 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. Always store away from incompatible compounds such as oxidizing agents.

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. (Colorless.)	Solubility	Very slightly soluble in water. Soluble in Alcohol, Ether, Benzene, Acetone.
Specific Gravity	1.634 (water=1)		
Molecular Weight	136.98	Partition Coefficient	Log P_{ow}: 0.485
Boiling Point	137°C (278.6°F)	Vapor Pressure	1.2 kPa (@ 20°C)
Melting Point	-36.5°C (-33.7°F)	Vapor Density	4.75 (Air = 1)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Pungent.
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	Protect from light. Avoid excessive heat and light.
Incompatibilities	Reacts violently with oxygen. Reacts with alkali metals, alkaine earth metals.

Section XI. Toxicological Information

RTECS Number	UC0525000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Not available.
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.

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Acute Toxic Effects	This material is toxic by inhalation. Highly 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.

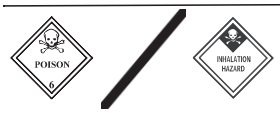
Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Although no evidence of its production could be found, bromoacetone may still be used in organic synthesis reactions. Its use in this field may result in its release to the environment through various waste streams. Bromoacetone is found in the essential oil of a seaweed species that grows in the ocean around the Hawaiian Islands. If released to air, a vapor pressure of 9 mm Hg at 20 deg C indicates bromoacetone will exist solely in the vapor-phase. Vapor-phase bromoacetone will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 54 days. Bromoacetone absorbs light strongly in the wavelength region between 290-350 nm, with a UV max occurring at 300 nm; however, kinetic rate data are not available to predict the rate at which direct photolysis may occur in the environment. If released to soil, bromoacetone is expected to have very high mobility based upon an estimated Koc of 4. Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 5.7X10-6 atm-cu m/mole. Bromoacetone may volatilize from dry soil surfaces based upon its vapor pressure. If released into water, bromoacetone is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's estimated Henry's Law constant. If bromoacetone is spilled into a body of water, it will sink to the bottom of the water column, dissolve slowly and turn violet rapidly. An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low. Although ketones are generally resistant to hydrolysis, the substituted bromine group may be susceptible to hydrolysis. While the hydrolysis of this compound may occur, the rate of hydrolysis cannot be predicted due to a lack of experimental data. Exposure of bromoacetone can occur through consumption of specific seaweeds found in the region of the Hawaiian Islands. With the exception of this specific exposure, there is no evidence that the general population is exposed to bromoacetone. Bromoacetone was used as a chemical warfare agent (lacrimator) during World War I which resulted in intentional inhalation exposure; however, there is no evidence that it has been used for this purpose since World War I.

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	**BROMOACETONE APPROVED PACKAGING ONLY!** **Forbidden to ship by Air** **DOT Class 6.1: Toxic material**
PIN Number	UN1569
Proper Shipping Name	Bromoacetone
Packing Group (PG)	II (Zone B) RQ: 1000 (454) MARINE POLLUTANT
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)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). On DSL
EINECS Number (EEC)	209-928-2
EEC Risk Statements	R26- Very toxic by inhalation. R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

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Notice to Reader

Continued on Next Page *Emergency phone number (800) 424-9300*

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