TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Flammable material; avoid heat and sources of ignition.** **POSSIBLE CARCINOGEN. MINIMIZE EXPOSURE.** **The health risks of this compound have not been fully determined.** **Exposure may cause irritation of the skin, eyes, and respiratory system.**	

Section I. Chemical Product and Company Identification

Chemical Name: **2-Chloro-2-methylpropane**

Catalog Number	C0208
Synonym	tert-Butyl Chloride
Chemical Formula	$(CH_3)_3CCl$
CAS Number	507-20-0

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
2-Chloro-2-methylpropane	507-20-0	Min. 98.0 (T)	This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.	Not available.

Section III. Hazards Identification

Acute Health Effects

No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Possible carcinogen.
(sufficient evidence in animals, no adaquate data in humans)
Tumorigenic: Mouse (intraperitoneal) 3000 mg/kg/8W-I. Neoplastic by RTECS criteria.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.

Skin Contact

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.

Inhalation

If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.

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, administer artificial respiration. 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. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

Section V. Fire and Explosion Data

Flammability	Flammable.	Auto-Ignition	Not available.
Flash Points	-18°C (-0.4°F)	Flammable Limits	Not available.

Combustion Products

These products are toxic carbon oxides (CO, CO_2).

Fire Hazards

Forms explosive mixtures in air.
Extremely flammable in presence of open flames and sparks, of shocks, of heat.

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.
No additional information is available regarding the risks of explosion.

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Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO_2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Flammable liquid. Harmful liquid. Keep away from heat and sources of ignition. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information	FLAMMABLE. POSSIBLE CARCINOGEN. Reactive with strong oxidizers; may be ignited by heat, sparks, or flames. Vapors may travel to source of ignition and flash back. Tightly seal container and store in a cool place. Closed containers may explode from heat of a fire. Empty containers may pose a fire risk. Evaporate residue under a fume hood if possible. Ground all equipment containing material. Keep away from heat and sources of ignition. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively. Avoid contact with skin and eyes. Always store away from incompatible compounds such as oxidizing agents, alkalis (bases).

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	This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid.	Solubility	Sparingly soluble in water. Miscible with alcohol and ether.
Specific Gravity	0.84 (water=1)		
Molecular Weight	92.57	Partition Coefficient	Not available.
Boiling Point	51 to 52°C (123.8 to 125.6°F)	Vapor Pressure	4.82 PSI (@ 20°C)
Melting Point	-26.5°C (-15.7°F)	Vapor Density	3.2 (Air = 1)
Refractive Index	1.38686 @ 18°C	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
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 oxidizing agents, alkalis (bases).

Section XI. Toxicological Information

RTECS Number	TX5040000
Routes of Exposure	Eye contact. Ingestion. Inhalation. Skin contact.
Toxicity Data	Not available.
Chronic Toxic Effects	**CARCINOGENIC EFFECTS** : Possible carcinogen. (sufficient evidence in animals, no adaquate data in humans) Tumorigenic: Mouse (intraperitoneal) 3000 mg/kg/8W-I. Neoplastic by RTECS criteria. **MUTAGENIC EFFECTS** : Not available. **TERATOGENIC EFFECTS** : Not available. **DEVELOPMENTAL TOXICITY**: Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.
Acute Toxic Effects	No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

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

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or 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 this substance.

Section XIV. Transport Information

DOT Classification	DOT CLASS 3: Flammable liquid.
PIN Number	UN1127
Proper Shipping Name	Chlorobutanes
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)	Not controlled under WHMIS (Canada).
EINECS Number (EEC)	208-066-4
EEC Risk Statements	R11- Highly flammable. R18- In use, may form flammable/explosive vapor-air mixture.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

Version 1.0
Validated on 11/4/1997.
Printed 1/27/2005.

Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, 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.