

Material Safety Data Sheet

HAZARD WARNINGS			RISK PHRASES	PROTECTIVE CLOTHING
			Flammable material; avoid heat and sources of ignition. Corrosive to eyes and skin on contact. Harmful compound, minimize exposure. Decomposes violently by water or alcohol. Lachrymator.	

Section I. Chemical Product and Company Identification

Chemical Name	Acetyl Chloride			
Catalog Number	A0082	Supplier	TCI America 9211 N. Harborside St. Portland OR 1-800-423-8616	
Synonym	Not available.			
Chemical Formula	C ₂ H ₃ ClO			
CAS Number	75-36-5	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
Acetyl Chloride	75-36-5	Min. 98.0 (GC, T)	Not available.	Rat LD ₅₀ (oral) 910 mg/kg

Section III. Hazards Identification

Acute Health Effects	Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. 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 or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

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. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
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	DO NOT INDUCE VOMITING. 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	734 °C (1353.2 °F)
Flash Points	5 °C (41 °F).	Flammable Limits	LOWER: 7.3% UPPER: 19%
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), halogenated compounds. WARNING: Highly toxic HCl gas is produced during combustion.		
Fire Hazards	Not available.		
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	Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures**Spill Cleanup
Instructions**

Flammable material. Corrosive material. Harmful material. Material reacts violently with water. Lachrymatory. 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 curtain to divert vapor drift. 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**

FLAMMABLE. CORROSIVE. HARMFUL. PROTECT FROM WATER. LACHRYMATORY. Keep container dry. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively. 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

Face shield. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

**Exposure Limits**

Not available.

Section IX. Physical and Chemical Properties**Physical state @ 20°C**

Liquid. (Clear, colorless.)

Solubility

Miscible with ether, benzene, chloroform, glacial acetic acid, petroleum ether. Soluble in acetone, acetic acid.

Specific Gravity

1.105 (water=1)

Molecular Weight

78.5

Partition Coefficient

Not available.

Boiling Point

50 to 52°C (122 to 125.6°F)

Vapor Pressure

32 Pa (@ 20°C)

Melting Point

-112°C (-169.6°F)

Vapor Density

2.7 (Air = 1)

Refractive Index

1.389

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

Avoid excessive heat and light.
KEEP AWAY FROM WATER.

Incompatibilities

Reactive with oxidizing agents, strong alkalis (bases), alcohols.

Section XI. Toxicological Information**RTECS Number**

AO6390000

Routes of Exposure

Eye Contact. Ingestion. Inhalation. Skin contact.

Toxicity Data

Rat LD₅₀ (oral) 910 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Acute Toxic Effects

Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Acetyl chloride's production and use in chemical synthesis (acetylating agent) particularly in the manufacture of pharmaceuticals and dyestuffs may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 287 mm Hg at 25 deg C indicates acetyl chloride will exist solely as a vapor in the ambient atmosphere. Vapor-phase acetyl chloride will react with atmospheric moisture and its half-life will depend on the humidity of the air. No half-lives for air with different water contents could be found; however, acetyl chloride is known to fume in moist air. If released in water or on land acetyl chloride is not expected to persist as it reacts violently with water and other hydrogen active compounds such as amines, phenols and alcohols. Reaction of acetyl chloride in the presence of water produces acetic acid and hydrochloric acid. Acetyl chloride may volatilize from dry soil surfaces based upon its vapor pressure. Bioconcentration in aquatic organisms is not expected based on the short lifetime of this compound in water. Occupational exposure to acetyl chloride may occur through inhalation and dermal contact with this compound at workplaces where acetyl chloride 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.
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Section XIV. Transport Information

DOT Classification	DOT Class 3: Flammable liquid. DOT Class 8: Corrosive material
PIN Number	UN1717
Proper Shipping Name	Acetyl Chloride
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)	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS E: Corrosive liquid. On DSL
EINECS Number (EEC)	200-865-6
EEC Risk Statements	R10- Flammable. R18- In use, may form flammable/explosive vapor-air mixture. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R35- Causes severe burns. R41- Risk of serious damage to eyes.
Japanese Regulatory Data	ENCS No. 2-629 ; 2-631

Section XVI. Other Information

Version 1.0
Validated on 5/4/2007.
Printed 5/11/2011.

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.