

MSDS Number: **A0806** * * * * *Effective Date: 07/03/07* * * * * *Supersedes:*
05/07/07

MSDS

Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

ACETYL CHLORIDE

1. Product Identification

Synonyms: Acetic acid, chloride; Ethanoyl chloride; Acetic chloride

CAS No.: 75-36-5

Molecular Weight: 78.50

Chemical Formula: CH₃COCl

Product Codes: 2456

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
-----	-----	-----

Acetyl Chloride	75-36-5	90 - 100%
Yes		

3. Hazards Identification

Emergency Overview

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. MAY BE FATAL IF SWALLOWED OR INHALED. FLAMMABLE LIQUID AND VAPOR. WATER REACTIVE. VAPORS CAUSE SEVERE IRRITATION TO EYES AND RESPIRATORY TRACT.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 3 - Severe (Water Reactive)

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;
PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red Stripe (Store Separately)

Potential Health Effects

Inhalation:

Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Inhalation may be fatal as a result of spasm inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

Ingestion:

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea.

Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact:

Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Flash point: 4C (39F) CC

Autoignition temperature: 390C (734F)

Flammable limits in air % by volume:

lcl: 5

Flammable.

Explosion:

Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media:

Carbon dioxide or dry chemical. Do not use water or foam.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Combustion by-products include phosgene and hydrogen chloride gases. Structural firefighter's protective clothing is ineffective for fires involving this material. Stay away from sealed containers.

6. Accidental Release Measures

DANGER! FLAMMABLE. Reacts violently with water to release hydrogen chloride. Ventilate area of leak or spill. Keep water away from spilled material. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Cover liquid with powder from fire extinguisher and sodium bicarbonate, soda ash or slaked lime. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Use non-sparking tools and equipment. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of

reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Protect from moisture. Storage containers preferably to be of glass or Teflon. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Colorless or slightly yellow fuming liquid.

Odor:

Strong pungent odor.

Solubility:

Decomposes violently in water.

Specific Gravity:

1.11 @ 20C/4C

pH:

No information found.

% Volatiles by volume @ 21C (70F):

100

Boiling Point:

52C (126F)

Melting Point:

-112C (-170F)

Vapor Density (Air=1):

2.7

Vapor Pressure (mm Hg):

740 @ 50C (122F)

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable in sealed containers at 25C (77F). Volatile. Will fume when exposed to moist air. Readily hydrolyzes to form HCL and acetic acid.

Hazardous Decomposition Products:

May produce carbon monoxide, carbon dioxide, hydrogen chloride and phosgene when heated to decomposition.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Water, ethyl alcohol, dimethyl sulfoxide, amines, and alkalis. Readily hydrolyzes in moist air to form hydrogen chloride and acetic acid.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 910 mg/kg.

-----\Cancer Lists\-----

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
----- None	-----	-----	-----
Acetyl Chloride (75-36-5)	No	No	

12. Ecological Information

Environmental Fate:

Because its high reactivity, this material is not expected to persist if released to soil, water or air.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: ACETYL CHLORIDE

Hazard Class: 3, 8

UN/NA: UN1717

Packing Group: II

Information reported for product/size: 100ML

International (Water, I.M.O.)

Proper Shipping Name: ACETYL CHLORIDE

Hazard Class: 3, 8

UN/NA: UN1717

Packing Group: II

Information reported for product/size: 100ML

International (Air, I.C.A.O.)

Proper Shipping Name: ACETYL CHLORIDE
Hazard Class: 3, 8
UN/NA: UN1717
Packing Group: II
Information reported for product/size: 100ML

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient TSCA EC Japan
Australia

Acetyl Chloride (75-36-5) Yes Yes Yes
Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient Korea --Canada--
Phil. DSL NDSL

Acetyl Chloride (75-36-5) Yes Yes No
Yes

-----\Federal, State & International Regulations - Part 1\-----

313----- -SARA 302- -----SARA
Ingredient RQ TPQ List
Chemical Catg.

Acetyl Chloride (75-36-5) No No No
No

-----\Federal, State & International Regulations - Part 2\-----

TSCA- -RCRA- -
Ingredient CERCLA 261.33 8(d)

Acetyl Chloride (75-36-5) 5000 U006 No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: Yes (Pure / Liquid)

Australian Hazchem Code: 4WE

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **3** Flammability: **3** Reactivity: **2** Other: **Water reactive**

Label Hazard Warning:

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. MAY BE FATAL IF SWALLOWED OR INHALED. FLAMMABLE LIQUID AND VAPOR. WATER REACTIVE. VAPORS CAUSE SEVERE IRRITATION TO EYES AND RESPIRATORY TRACT.

Label Precautions:

Do not get in eyes, on skin, or on clothing.

Do not breathe vapor.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Keep away from heat, sparks and flame.

Do not contact with water.

Label First Aid:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR

IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)