Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **ACETYL CHLORIDE**

Synonyms: Acetic Chloride; Ethanoyl Chloride
CAS No: 75-36-5
Molecular Formula: C_2H_3ClO
RTK Substance No: 0013
Description: Colorless to pale yellow, fuming liquid with a pungent odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health **3 - Fire** **2 ~~W~~ - Reactivity** **DOT#:** UN 1717 **ERG Guide #:** 155 **Hazard Class:** 3 (Flammable)	**Acetyl Chloride** is a FLAMMABLE AND REACTIVE LIQUID. Use dry chemical or CO_2 as extinguishing agents. DO NOT USE WATER OR FOAM. POISONOUS GASES ARE PRODUCED IN FIRE, including *Hydrogen Chloride* and *Phosgene*. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Do not get water inside containers. Vapors may travel to a source of ignition and flash back. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source.	**Acetyl Chloride** reacts violently with WATER to release heat and toxic and corrosive *Hydrogen Chloride* and *Acetic Acid*. **Acetyl Chloride** reacts violently with ALCOHOLS; STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); AMINES; POWDERED METALS; PHOSPHORUS TRICHLORIDE; and DIMETHYL SULFOXIDE.

SPILL/LEAKS

Isolation Distance:

Small Spill in Water: 30 meters (100 feet)

Large Spill in Water: 120 meters (400 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.

DO NOT USE WATER.

Keep **Acetyl Chloride** out of confined spaces, such as sewers, because of the possibility of an explosion.

DO NOT wash into sewer.

Hazardous to the environment, especially to water.

PHYSICAL PROPERTIES

Odor Threshold:	Pungent
Flash Point:	40ºF (4ºC)
LEL:	5%
UEL:	19%
Auto Ignition Temp:	734ºF (390ºC)
Vapor Density:	2.7 (air = 1)
Vapor Pressure:	249 mm Hg at 68ºF (20ºC)
Specific Gravity:	1.1 (water = 1)
Water Solubility:	Violently reactive
Boiling Point:	124ºF (51ºC)
Freezing Point:	-170ºF (-112ºC)
Molecular Weight:	78.5

EXPOSURE LIMITS

No occupational exposure limits have been established for **Acetyl Chloride**.

PAC Levels: PAC-1 = 0.85 ppm; PAC-2 = 9.4 ppm; PAC-3 = 56 ppm

PROTECTIVE EQUIPMENT

Gloves:	Butyl (3-hr breakthrough)
Coveralls:	DuPont Tychem® F and TK; Kappler® Zytron® 300 or 500; and Saint-Gobain ONESuit® TEC (>8-hr breakthrough for *Acid Halides)*
Respirator:	Supplied air

HEALTH EFFECTS

Eyes:	Severe irritation and burns
Skin:	Severe irritation, burns, dryness, redness and blisters
Inhalation:	Nose, throat and lung irritation with coughing and severe shortness of breath (pulmonary edema)

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention immediately.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water. Seek medical attention immediately.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer to a medical facility.

Medical observation is recommended as symptoms may be delayed.