

Common Name: **ALUMINUM CHLORIDE**

Synonyms: Aluminum Trichloride; Anhydrous Aluminum Chloride

CAS No: 7446-70-0

Molecular Formula: $AlCl_3$

RTK Substance No: 0057

Description: Yellowish or grayish-white crystalline solid or powder with a sharp odor that is water reactive

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p>3 - Health 0 - Fire 2-W - Reactivity</p> <p>DOT#: UN 1726 ERG Guide #: 137 Hazard Class: 8 (Corrosive)</p>	<p>Non-flammable</p> <p>Use dry chemical or CO_2 as extinguishing agents. DO NOT USE WATER.</p> <p>Use water spray to keep fire-exposed containers cool. DO NOT get water inside tanks.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Hydrogen Chloride</i>.</p> <p>Aluminum Chloride may ignite combustibles (wood, paper and oil).</p>	<p>Aluminum Chloride may react violently with WATER and MOIST AIR to form toxic <i>Hydrogen Chloride</i> gas and heat.</p> <p>Aluminum Chloride is not compatible with ALUMINUM OXIDE; CARBON OXIDE; PHENYL AZIDE; GLYCIDOL; NITROBENZENE; ALKENES; BENZOYL CHLORIDE; NAPHTHALENE; ETHYLENE OXIDE; OXYGEN DIFLUORIDE; NITROMETHANE; ANILINES; ETHYLENIMINE; OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); EPICHLOROHYDRIN; HALOGENATED HYDROCARBONS; and ALCOHOL.</p>

SPILL/LEAKS

Isolation Distance:
Small Spills: 30 meters (100 feet) when spilled in water
Large Spills: 120 meters (400 feet) when spilled in water
Fire: 800 meters (1/2 mile)

Collect powdered material in the most convenient and safe manner and deposit in sealed containers.

Keep **Aluminum Chloride** out of confined spaces where water may be present (such as sewers), because of the possibility of an explosion.

Harmful to aquatic life at low concentrations.

PHYSICAL PROPERTIES

Odor Threshold: Sharp

Flash Point: Nonflammable

Vapor Density: 2.5 (air = 1)

Vapor Pressure: 1 mm Hg at 212°F (100°C)

Specific Gravity: 2.7 (water = 1)

Water Solubility: Decomposes

Boiling Point: 360°F (182°C)

Melting Point: 374°F (190°C)

Molecular Weight: 133.34

EXPOSURE LIMITS

OSHA: None
NIOSH: 2 mg/m³, 10-hr TWA
ACGIH: Withdrawn
IDLH: None

PROTECTIVE EQUIPMENT

Gloves: Natural Rubber and Nitrile (for *solid*) and Neoprene (if *HCl* gas is present)

Coveralls: DuPont Tyvek® (for *solid*) and Tychem® Responder (if *Hydrogen Chloride* gas is present)

Respirator: >2 mg/m³ - Full facepiece APR with High efficiency filter
If *Hydrogen Chloride* gas is present, use Supplied air

HEALTH EFFECTS

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

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Quickly brush off excess chemical from the face. Immediately flush with large amounts of water for at least 30 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while flushing. Seek medical attention immediately.
Quickly remove contaminated clothing. Immediately blot or brush off excess chemical and wash gently with large amounts of water for at least 30 minutes. 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.