

Common Name: **AMMONIUM ARSENATE**

Synonyms: Diammonium Arsenate

CAS No: 7784-44-3

Molecular Formula: $(\text{NH}_4)_2 \text{HAsO}_4$

RTK Substance No: 0086

Description: White powder or colorless, crystalline solid with a characteristic Ammonia odor

HAZARD DATA

| Hazard Rating | Firefighting | Reactivity |
|---|---|--|
| <p>4 - Health</p> <p>0 - Fire</p> <p>0 - Reactivity</p> <p>DOT#: UN 1546</p> <p>ERG Guide #: 151</p> <p>Hazard Class: 6.1 (Poison)</p> | <p>Extinguish fire using an agent suitable for type of surrounding fire. Ammonium Arsenate itself does not burn.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Arsenic fumes, Ammonia</i> and <i>Nitrogen Oxides</i>.</p> <p>Use water spray to keep fire-exposed containers cool.</p> | <p>Ammonium Arsenate reacts with STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE) to produce <i>Ammonia</i>.</p> <p>Ammonium Arsenate reacts with METALS (such as IRON, ALUMINUM and ZINC), in the presence of WATER, to produce toxic <i>Arsine gas</i>.</p> |

SPILL/LEAKS

Isolation Distance:

Spill: 25 to 50 meters (80 to 160 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up.

May be hazardous to the environment, especially to aquatic and soil organisms.

PHYSICAL PROPERTIES

Odor Threshold: *Ammonia*-like odor

Flash Point: Noncombustible

Vapor Density: 2 (air = 1)

Water Solubility: Soluble

Molecular Weight: 176

EXPOSURE LIMITS

OSHA: 0.01 mg/m³, 8-hr TWA

NIOSH: 0.002 mg/m³, Ceiling

ACGIH: 0.01 mg/m³, 8-hr TWA

IDLH: 5 mg/m³

PAC LEVELS: PAC-1 = 1.5 mg/m³; PAC-2 = 17 mg/m³;

PAC-3 = 100 mg/m³

(All of the above are for *inorganic Arsenic*)

PROTECTIVE EQUIPMENT

Gloves: Nitrile and Natural Rubber

Coveralls: DuPont Tyvek®

Respirator: <0.1 mg/m³ - Full facepiece APR with cartridges specific for Ammonia and High efficiency particulate pre-filters
<5 mg/m³ - Supplied air
>5 mg/m³ - SCBA

HEALTH EFFECTS

Eyes: Irritation, burns, and red, watery eyes

Skin: Irritation, burns, rash and loss of pigment

Inhalation: Nose and throat irritation with coughing, wheezing and hoarseness

Weakness, headache, nausea, vomiting, and muscle cramps

Chronic: *Inorganic Arsenic compounds* cause skin, lung, and liver cancer in humans

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of water.

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

Transfer to a medical facility.