

Common Name: **ARSENIC TRIOXIDE**

Synonyms: Arsenous Oxide; White Arsenic

CAS No: 1327-53-3

Molecular Formula: As₂O₃

RTK Substance No: 0161

Description: Odorless, colorless to white crystal or powder

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health 0 - Fire 0 - Reactivity DOT#: UN 1561 ERG Guide #: 151 Hazard Class: 6.1 (Poison)	Extinguish fire using an agent suitable for type of surrounding fire. Arsenic Trioxide itself does not burn. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Arsenic fumes</i> . Use water spray to keep fire-exposed containers cool.	Arsenic Trioxide reacts with CHEMICALLY ACTIVE METALS (such as POTASSIUM, SODIUM, MAGNESIUM and ZINC); METALS (such as ALUMINUM, COPPER, IRON and ZINC FILINGS); and COMPOUNDS CONTAINING CHLORINE and FLUORINE to produce toxic <i>Arsine gas</i> . Arsenic Trioxide is not compatible with STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE) and OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES).

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and place into sealed containers for disposal.

DO NOT wash into sewer.

Arsenic Trioxide is harmful to aquatic life and may persist in the environment.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Noncombustible
Vapor Pressure:	66 mm Hg at 594°F (312°C)
Specific Gravity:	3.74 (water = 1)
Water Solubility:	Insoluble
Boiling Point:	869°F (465°C)
Melting Point:	379°F (193°C)
Molecular Weight:	197.8

EXPOSURE LIMITS

OSHA: 0.01 mg/m³, 8-hr TWA

NIOSH: 0.002 mg/m³, 15-min Ceiling

ACGIH: 0.01 mg/m³, 8-hr TWA

IDLH: 5 mg/m³

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

The Protective Action Criteria values are:

PAC-1 = 0.4 mg/m³ PAC-2 = 3 mg/m³ PAC-3 = 9.1 mg/m³

PROTECTIVE EQUIPMENT

Gloves:	Nitrile and Natural Rubber
Coveralls:	Tyvek®
Respirator:	SCBA

HEALTH EFFECTS

Eyes:	Irritation, burns, red and watery eyes
Skin:	Irritation, burns, itching, rash and loss of pigment
Inhalation:	Nose and throat irritation with coughing, wheezing and hoarseness Weakness, headache, nausea, vomiting, and muscle cramps
Chronic:	Cancer (lung) in humans and animals

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 soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer to a medical facility.