

Common Name: **ARSENIC TRISULFIDE**

Synonyms: Arsenic Sesquisulfide; Arsenous Sulfide; King's Gold

CAS No: 1303-33-9

Molecular Formula: As_2S_3

RTK Substance No: 0162

Description: Odorless, yellow or orange, crystalline powder

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p>3 - Health</p> <p>0 - Fire</p> <p>0 - Reactivity</p> <p>DOT#: UN 1557</p> <p>ERG Guide #: 152</p> <p>Hazard Class: 6.1 Poison)</p>	<p>Extinguish fire using an agent suitable for type of surrounding fire. Arsenic Trisulfide itself does not burn.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Arsenic Oxides, Sulfur Oxides, Hydrogen Sulfide</i> and <i>Arsine</i>.</p> <p>Use water spray to keep fire-exposed containers cool.</p>	<p>Arsenic Trisulfide may react violently with POTASSIUM CHLORATE and other OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); SULFUR; and SODIUM SULFIDE.</p> <p>Arsenic Trisulfide reacts with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and ACID FUMES to produce highly toxic gases and fumes such as <i>Hydrogen Sulfide, Arsine, and Arsenic</i>.</p> <p>When water solutions of Arsenic Trisulfide contact METALS (such as IRON, ALUMINUM and ZINC), highly toxic <i>Arsine gas</i> may be released.</p> <p>Arsenic Trisulfide reacts with WATER, STEAM or MOIST AIR to produce <i>Hydrogen Sulfide gas</i>.</p>

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Harmful to aquatic life in very low concentrations.

DO NOT wash into sewer.

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and deposit in sealed containers.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Nonflammable
Specific Gravity:	3.4 (water = 1)
Water Solubility:	Slightly soluble
Boiling Point:	1,305°F (707°C)
Melting Point:	594°F (312°C)
Molecular Weight:	246

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*)

PROTECTIVE EQUIPMENT

Gloves:	Nitrile and Natural Rubber
Coveralls:	DuPont Tyvek®
Respirator:	<0.1 mg/m ³ - Full facepiece APR with High efficiency filter <0.5 mg/m ³ - Supplied air

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, nausea and vomiting, headache and muscle cramps
Chronic:	<i>Arsenic compounds</i> cause skin, liver, and lung 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 soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.