

Common Name: **ANTIMONY**

Synonyms: Antimony Metal; Antimony Powder

CAS No: 7440-36-0

Molecular Formula: Sb

RTK Substance No: 0141

Description: Naturally occurring, silvery-white, hard, brittle metal that is also formed from smelting *Lead* and other metals

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 2 - Fire 0 - Reactivity DOT#: UN 2871 ERG Guide #: 170 Hazard Class: 6.1 (Toxic)	<p>Antimony is not combustible in bulk form. However, Antimony powder and dust may be COMBUSTIBLE.</p> <p>Use sand, dry chemical, CO₂, water spray or foam as extinguishing agents.</p> <p>DO NOT USE WATER on <i>molten Antimony</i>.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Antimony Oxide</i> and <i>Antimony Hydride (Stibine)</i>.</p> <p>Antimony may form an ignitable dust/air mixture in closed tanks or containers.</p> <p><i>Finely dispersed Antimony powder and dust</i> may form explosive mixtures in air.</p>	<p>Antimony reacts violently with HALOGENS (such as FLUORINE, CHLORINE and BROMINE) and STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) to cause fires and explosions.</p> <p>Contact with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and freshly formed (nascent) HYDROGEN can also form toxic <i>Antimony Hydride (Stibine) gas</i>.</p> <p>Antimony is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, and NITRATES); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); IODINE; and POWDERED METALS.</p>

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

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

Ground and bond containers when transferring **Antimony powder**.

Use only non-sparking tools and equipment.
DO NOT wash into sewer.

PHYSICAL PROPERTIES

Flash Point: Noncombustible (*bulk form*)
Combustible (*powder and dust*)

Vapor Pressure: 1 mm Hg at 1,627°F (886°C)

Specific Gravity: 6.69 (water = 1)

Water Solubility: Insoluble

Boiling Point: 2,975°F (1,635°C)

Melting Point: 1,166°F (630°C)

Molecular Weight: 121.8

EXPOSURE LIMITS

OSHA: 0.5 mg/m³, 8-hr TWA

NIOSH: 0.5 mg/m³, 10-hr TWA

ACGIH: 0.5 mg/m³, 8-hr TWA

IDLH: 50 mg/m³

The Protective Action Criteria values are:

PAC-1 = 1.5 mg/m³ PAC-2 = 20 mg/m³

PAC-3 = 50 mg/m³

PROTECTIVE EQUIPMENT

Gloves: Nitrile, Neoprene and Natural Rubber

Coveralls: Tyvek

Respirator: Spill or >0.5 mg/m³: full facepiece APR with *P100 filters*
Fire or >5 mg/m³: SCBA

HEALTH EFFECTS

Eyes: Irritation

Skin: Irritation, redness and itchy skin rash

Inhalation: Nose, throat and lung irritation, with coughing, wheezing and shortness of breath

Headache, dizziness, nausea, vomiting, and abdominal pain

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses.

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.