

Common Name: **1,2-OXATHIOLANE, 2,2-DIOXIDE**

Synonyms: Propane Sultone; 1,3-Propane Sultone

CAS No: 1120-71-4

 Molecular Formula: C₃H₆O₃S

RTK Substance No: 1446

Description: White, crystalline solid or colorless liquid

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 1 - Fire 0 - Reactivity DOT#: UN 2811 ERG Guide #: 154 Hazard Class: 6.1 (Poison)	1,2-Oxathiolane, 2,2-Dioxide may burn, but does not readily ignite. Extinguish fire using an agent suitable for type of surrounding fire. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Sulfur Dioxide</i> . Use water spray to keep fire-exposed containers cool.	1,2-Oxathiolane, 2,2-Dioxide reacts with REDUCING AGENTS (such as LITHIUM, SODIUM, ALUMINUM and their HYDRIDES) to produce toxic and flammable <i>Hydrogen Sulfide</i> gas. 1,2-Oxathiolane, 2,2-Dioxide reacts with MOIST AIR to form toxic <i>3-Propane Sulfonic Acid</i> .

SPILL/LEAKS

Isolation Distance:

 Spills (solid): 25 meters (75 feet)
 (liquid): 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in dry sand, earth, or a noncombustible material and place into sealed containers for disposal.

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

DO NOT wash into sewer.

PHYSICAL PROPERTIES

Flash Point: >235° F (>113° C)

Specific Gravity: 1.39 (water = 1)

Water Solubility: Slightly soluble

Boiling Point: 311° to 315° F (155° to 157° C)

Melting Point: 87° F (31° C)

Molecular Weight: 122.1

EXPOSURE LIMITS

NIOSH: Lowest feasible

ACGIH: Low as possible

The Protective Action Criteria values are:

 PAC-1 = 0.5 mg/m³

 PAC-2 = 3.5 mg/m³

 PAC-3 = 250 mg/m³

PROTECTIVE EQUIPMENT

 Gloves: Nitrile and Neoprene (for *solid 1,2-Oxathiolane, 2,2-Dioxide*)

 Coveralls: Tyvek® (for *solid 1,2-Oxathiolane, 2,2-Dioxide*)

 Respirator: >0.5 mg/m³ - SA or SCBA

HEALTH EFFECTS

Eyes: Irritation

Skin: Irritation

Inhalation: Nose and throat irritation

Chronic: Cancer (Leukemia and brain, skin and mammary gland)

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.

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.