

## BRONZE & BLACKENING SOLUTION

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### 1. Product Identification

**Synonyms:** Liver of sulfur; sulfured potassa; hepar sulfuris  
**CAS No.:** 39365-88-3 (Potash) **Molecular Weight:** Not applicable to mixtures.  
**Chemical Formula:** Not applicable. **Product Codes:** A02

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Potassium Trisulfide	37488-75-8	-5%	Yes
Potassium Thiosulfate Hydrated	10294-66-3	-5%	Yes

### 3. Hazards Identification

HARMFUL IF SWALLOWED OR INHALED. CAUSES, IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR.

Health Rating: 2 - Moderate    Flammability Rating: 0    Reactivity Rating: 2 - Moderate    Contact Rating: 1 - Slight  
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

#### Potential Health Effects

**Inhalation:** Inhalation of dust can irritate the respiratory tract. Production of hydrogen sulfide from reaction with acids or high temperature hydrolysis is a significant secondary hazard.

**Ingestion:** Mildly corrosive to mucous membrane due to hydrolysis of potassium sulfide but greater danger is formation of hydrogen sulfide in the stomach and its absorption. Nausea, vomiting and diarrhea can occur.

**Skin Contact:** Irritant especially if hydrolysis occurs on moist skin.

**Eye Contact:** Irritant, possibly corrosive or abrasive in acute cases. Conjunctivitis, photophobia, pain, blurred vision are symptoms.

**Chronic Exposure:** No information found.

**Aggravation of Pre-existing Conditions:** No information found.

### 4. First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire Fighting Measures

**Fire:** Dust may form explosive mixtures with air. **Explosion:** Not considered to be an explosion hazard.

**Fire Extinguishing Media:** Use any means suitable for extinguishing surrounding fire.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. Sealed containers may rupture when heated.

**6. Accidental Release Measures** Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

### 7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

### 8. Exposure Controls/Personal Protection

**Skin Protection:** Wear protective gloves and clean body-covering clothing.  
**Eye Protection:** Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

**Appearance:** Yellow-brown to brown liquid  
**Solubility:** Soluble in water.  
**pH:** No information found.  
**Boiling Point:** Not applicable.  
**Vapor Density (Air=1):** No information found.  
**Evaporation Rate (BuAc=1):** No information found.

**Odor:** Rotten egg, sulfide odor.  
**Specific Gravity:** No information found.  
**% Volatiles by volume @ 21C (70F):** 0  
**Melting Point:** No information found.  
**Vapor Pressure (mm Hg):** No information found.

#### 10. Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage.  
**Hazardous Decomposition Products:** Burning may produce sulfur oxides.  
**Hazardous Polymerization:** Will not occur.  
**Incompatibilities:** Oxidizing agents, halogens and halogenated organic compounds, acids, alcohols, strong reducing agents, carbonated waters, acid salts, combustible materials, most common metals, zinc, aluminum. Avoid air, heat, flame, sources of ignition, dusting.  
**Conditions to Avoid:** Dusting, from drying out.

#### 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Potassium Trisulfide (37488-75-8)	No	No	None
Potassium Thiosulfate Hydrated (10294-66-3)	No	No	None

#### 12. Ecological Information

**Environmental Fate:** No information found.      **Environmental Toxicity:** No information found.

#### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

**Domestic (Land, D.O.T.)**

**Proper Shipping Name:** Corrosive liquid, nos (Potassium Sulfide, Ammonia)

**Hazard Class:** 8

**UN/NA:** UN1760

**Packing Group:** II

**Information reported for product/size:** 100LB

#### 15. Regulatory Information

Ingredient	TSCA	EC
Potassium Trisulfide (37488-75-8)	Yes	Yes
Potassium Thiosulfate Hydrated (10294-66-3)	Yes	Yes

#### 16. Other Information

**NFPA Ratings:** Health: 2 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**

HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR.

**Label Precautions:**

Keep container closed. Use only with adequate ventilation. Avoid breathing dust.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

