

MATERIAL SAFETY DATA SHEET

1. Identification of the Substance and of the Company

1.1. Identification of the Substance :

Commercial Name : Antimony Trisulfide

1.2. Company Identification :

Manufacturer :

Özdemir Antimuan Madenleri A.Ş.
İstanbul Yolu 10. Km No: 310
Yenimahalle - Ankara - TURKEY
Tel : ++ 90 312 587 10 00
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1.3. Emergency Contacts :

Tel : ++ 90 312 587 10 00
Fax : ++ 90 312 587 11 00
Mrs. Türkan Metin

2. Composition and Ingredient Information

2.1. Common Name	Chemical Formula	CAS Nr.	Weight (%)
Antimony Sulfide	Sb ₂ S ₃	1345-04-6	98- 100

2.2. Other Names and Formulations :

Common Synonyms : Stibnite, Stibital, AntimonyTrisulfide,
Black Antimony,
Needle Antimony, CRUDUM.

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3. Hazards Identification

3.1. Appearance : Free flowing black granules, powder.

3.2. Primary Route(s) of Exposure : Inhalation, skin, eye

3.3. Exposure Limits : OSHA : 0.50 mg/m³ as Sb
ACGIH : 0.50 mg/m³ as Sb

3.4. Concentration :
Essentially % 100
Commercially min 60.00 % Sb
max 70.50 % Sb

4. Toxicity Data

4.1. Acute Effects :
Harmful if swallowed, inhaled, or absorbed through skin. Causes eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract.

4.2. Toxicity Data : IPR-MUS LD 50 : 209 mg/KG
85 G MAT - ,23,82

4.3. Target Organ Data :
Behavioral (sommolence), cardiac (EKG changes not diagnostic of above), vascular (BP elevation not characterized in autonomic section), lungs, thorax or respiration (dyspnae) gastrointestinal (ulceration or bleeding from stomach), nutritional and gross metabolic (weight loss or decreased weight gain) Only selected registry of toxic effects of chemicals substances (RTECS) data is presented here.

4.4. Dot Class : 6.1
Dot Label : Keep Away from Food

4.5. Osha Status :
This product is hazardous under the criteria of the American Federal OSHA Hazards Communication Standart 29.

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5. Physical Data

- 5.1. Physical Form** : Black powder, silver powder or silver lumps.
- 5.2. Color - Luster** : Black or silver ; steel Gray, Metallic
- 5.3. Odor** : Odorless
- 5.4. Molecular Weight** : 339.72
- 5.5. Boiling Point** : 1150 °C
- 5.6. Melting / Freezing Point** : 550 °C
- 5.7. Solubility in Water** : Practically insoluble
- 5.8. Specific Gravity** : 4.64 gr/cm³
- 5.9. Crystall System** : Orthorhombıç ; 2m/2m/2m
- 5.10. Hardness** : 2

6. Fire and Explosion Data

- 6.1. Flash Point** : Not Applicable
- 6.2. Auto - Ignition Temperature** : Not Established
- 6.3. Extinguishing Media** : Carbon dioxide, dry chemical powder or appropriate foam.
- 6.4 Special Fire Fighting Procedures** :
Wear self - contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- 6.5.1. Unusual Fire/Explosion Hazards** :
This material, like most materials in powder form, is capable of creating a dust explosion. Emits toxic fumes under fire conditions.

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7. Human Health Data

7.1. Route (s) of Entry : Eye Contact, Skin Contact, Inhalation, Ingestion

7.2. Human Effects and Symptoms of Overexposure:

7.2.1.Acute Inhalation :
Inhalation may irritate the respiratory tract. Symptoms may include ; coughing, shortness of breath, sore throat and runny nose. If sufficient amounts are inhaled and absorbed, symptoms may resemble those in acute ingestion.

7.2.2.Acute Skin Contact :
Skin contact may cause irritation with symptoms of redness, swelling, itching and pain.

7.2.3.Acute Eye Contact :
Eye contact may cause irritation with symptoms of redness, swelling, itching, tearing and pain.

7.2.4.Acute Ingestion :
Ingestion may cause gastroenteritis (inflammation of the lining membrane of the stomach and intestines) with abdominal pain, nausea, vomiting and diarrhea. Systemic effects may follow and may include ringing of the ears, dizziness, elevated blood pressure, blurred vision and tremors.

7.2.5.Chronic Effects of Exposure :

7.3. Carcinogenicity :
This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

7.4. Medical Conditions Aggravated By Exposure : Persons with preexisting eye or skin conditions or impaired pulmonary function may be more susceptible to the effects of this product.

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8. Emergency and First Aid Procedures

- 8.1. First Aid For Eyes** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
- 8.2. First Aid For Skin** : In case of contact, flush skin with water . Wash clothing before reuse. Call a physician if irritation occurs.
- 8.3. First Aid For Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- 8.4. First Aid For Ingestion** : If swallowed, call a physician immediately

9. Employee Protection Recommendations

- 9.1. Eye Protection Requirements** : Safety glasses or goggles.
- 9.2. Skin Protection Requirements** : PVC gloves with impervious boots, apron or coveralls. Employees should wash their hands and face before eating, drinking or using tobacco products. Spread special cream on open skin.
- 9.3. Respirator Requirements** : Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator must be worn.
- 9.4. Ventilation Requirements** : Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.
- 9.5. Additional Protective Measures** : Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous chemicals

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10. Reactivity Data

- 10.1. Stability** : Stable under ordinary conditions of use and storage.
- 10.2. Hazardous Polymerization** : Will not occur
- 10.3. Incompatibilities** : Strong Oxidizing Agents&Avoid Contact With Acid
- 10.4. Instability Conditions** : Excessive temperatures.
- 10.5. Decomposition Temperature** : Not established.
- 10.6. Decomposition Products** : Antimony/Antimony Oxides, Sulfur Oxides & Hydrogen Sulfide Gas

11. Spill and Leak Procedures

- 11.1. Spill or Leak Procedures** : Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse dust into the air. Spill area can be washed with water. Collect wash water for approved disposal. Keep from entering water or ground water.
- 11.2. Waste Disposal Method** : Waste disposal should be in accordance with existing federal, state and local environmental regulations.

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12. Special Precautions & Storage Data

12.2. Storage Temperature (min/max) : Ambient/Ambient

12.3. Shelf Life : Unlimited in tightly closed container.

12.4. Special Sensitivity : None

12.5. Handling/Storage Precautions :

Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Store in a dry place away from direct sunlight, heat and incompatible materials. Reseal containers immediately after use. Store away from food and beverages.

Chemical Eng. : İlter DESTİ

Mining Eng. : Rıdvan GÜVEN