

# Material Safety Data Sheet

## Elemental Sulphur 99.5%

Update Nov/12

**Emergency Phone numbers:**

For shipments coming from Calgary, AB, Canada or Stockton, CA, USA Call collect— 403-279-2616 (8am –4pm, Mon-Fri) or CANTEC 613-996-6666 (24 hours)

For Shipments coming from Atmore, AL, USA Call collect—251-368-2560 (8am– 4pm, Mon-Fri) or Chemtrec 800-424-9300 (24 hours)

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 Stockton, CA, 95203  
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<b>Section I: Product Identification and Uses</b>
<b>Common Trade Name:</b> Elemental Sulphur 99.5%
<b>Synonym:</b> prilled sulphur
<b>Chemical Family:</b> Elemental sulphur
<b>Reportable Quantity:</b> None
<b>Marine Pollutant:</b> No
<b>US and Canadian Shipments:</b> None regulated as per schedule 2 section 33 (b) exemption for sulphur
<b>International Shipments:</b> <b>AIR(IATA):</b> Exempted under special provision A 105 SEA (IMGD): Exempted as per sulphur observations part 1 & 2 <b>Appearance:</b> Specifically formed product in the shape of pastilles.

<b>Section II: Hazardous Ingredients (Mixtures Only)</b>
<p>* material components with chlorates, nitrates or other oxidizing agents may be explosive. Sulphur with alkalis or alkaline earth.</p> <p><b>Notice: the data and information presented herein are based upon tests, research and reports which are considered by us to be reliable and accurate. The data and information is presented without warranty, guarantee or liability on our part, and are presented to the customer for his/her own consideration, investigation and verification.</b></p>

<b>Section III: Hazardous Ingredients</b>		
Name	CAS No.	Concentration
Sulphur	7704-34-9	99.5%

<b>Section IV: Physical Data</b>
<b>Boiling Point:</b> 444°C (832°F)
<b>Melting Point:</b> 119°C (246°F)
<b>Vapor Density:</b> >1
<b>Solubility in Water (% by weight):</b> Insoluble
<b>Physical State and Appearance:</b> Bright Yellow in colour. May have a slight sulphur odor. Pellet or pastille in shape.
<b>Odor threshold:</b> slight sulphur odor
<b>Specific Gravity:</b> solid, 2.07 gm/ml
<b>Vapor Pressure (mm Hg at 20°C):</b> Solid: Less than 0.0001 mm. Hg at 20°C (68° F)
<b>Volatiles by Volume:</b> N/A
<b>Evaporation Rate (Butyl Acetate=) (Ether=):</b> N/A

<b>Section V. Fire and Explosion Data</b>
<b>This Product is:</b> Not Combustible
<b>Flash Points:</b> Pure liquid S- 188°C (370°F), Impure liquid- 168°C, (335°F)
<b>Flammable Limits:</b> LEL 35 gm/m <sup>3</sup> UEL 1400 gm/m <sup>3</sup> (dust)
<b>Auto-Ignition temperature:</b> Dust clouds 190°C (374°F), Undispersed Dust 220°C, (428°F)
<b>Flammable Limits in Air (% by VOL)</b>  Minimum explosion concentration is approximately 35gm per cu. Meter (0.035 oz per cu. ft.) Maximum  Explosive concentration lies between 1000-2000 (probably about 1400 gm/m <sup>3</sup> ) (1.4 oz per cu ft)
<b>Basic Firefighting Procedures: * Fire Extinguishing Agents Recommendations</b> <ol style="list-style-type: none"> <li>1. A fine water spray or fog is recommended</li> <li>2. CO<sub>2</sub> or dry chemical</li> <li>3. Small fires may be smothered with sand or soil sulphur</li> </ol> <p><b>*Fire Extinguishing Agents to AVOID—Hoses and extinguishers with pressure streams should be avoided where solid sulphur is dusty or where it may create a further hazard by raising more dust clouds</b></p> <p><b>*Special Fire Fighting Precautions: because burning sulphur evolves sulphur dioxide, breather apparatus or gas masks approved for use in acid-gas atmosphere should be used. Fumes from unprotected sulphur fires shall be avoided, if possible, by approaching for the upwind side.</b></p>
<b>Fire degradation products:</b> Combustion may produce sulphur dioxide
<b>Flammability:</b> Condition to avoid: Heat, sparks, open flame, static electricity or any other potential ignition source should be avoided. Avoid contact with incompatible materials.
<b>Unusual fire and explosion hazards:</b> Dust suspended in air is readily ignited by flames, static electricity or friction spark. Every reasonable step must be taken to minimize dust formation. Dust tight castings should be equipped with explosion relief vents. Sparkles electrical equipment is recommended. Handling equipment must be grounded or bonded to avoid static electricity. Keep away from source of flame or sparks. Detailed recommendations in Manufacturing Chemists Association SD-74 and National Safety Council 612 Bulletins covering “Sulphur” should be followed when handling elemental sulphur 99.5%

<b>Section VI: Reactivity Information</b>
<b>Stability:</b> Stable
<b>Conditions to avoid:</b> The main hazards are fire and dust explosions
<b>Hazardous Polymerization:</b> Will not occur

<b>Section VII: Health Hazard Information &amp; technology of Components</b>
<p><b>Primary Routes of Entry:</b> Inhalation: Sulphur dust may irritate the mucous membranes of the respiratory passage  Ingestions: Minimal toxicity, Irritating to mouth, throat and stomach. May cause digestive tract disorder/damage.  Skin: Frequent or prolonged contact may irritate the skin. Low toxicity  Eyes: sulphur dust is capable of irritating the inner surfaces of the eyelids.  Permissible Concentration: None Established</p>
<b>Toxicological Information:</b> Unusual Chronic Toxicity: N/A

<b>Section VIII: First Aid</b>
<b>Eye Contact:</b> Irrigate thoroughly with copious quantities plain water
<b>Skin Contact:</b> Wash with mild soap and water
<b>Ingestion:</b> If swallowed, induce vomiting only if victim is conscious. DO NOT attempt to give anything by mouth to an unconscious person.

<b>Section IX: Precautionary Measures:</b>
<b>Respiratory Protection:</b> Dust-type respirators shall be provided for dusty conditions. Breathing apparatus must be available for emergency use in case of fire.
<b>Eye &amp; Face Protection:</b> Dust-tight goggles with plastic or rubber frames may be helpful in dusty conditions.
<b>Hands, Arms and Body Protection:</b> Workers whose skin may be sensitive to sulphur dust should button collars, roll sleeves down, and gather trousers at the ankle. Gloves may be helpful.
<b>Other Clothing and Equipment:</b> Hard hat and safety shoes. Fire-retardant fabrics is recommended. Sulphur impregnated clothing should not be worn.
<b>Storage:</b> Solid becomes corrosive to metals when stored wet. Sulphur fertilizer will physically break down when exposed to moisture or water.
<b>Ventilation:</b> Local exhaust if dusty conditions prevail
<b>Normal Handling:</b> Avoid breathing dust and keep clothing as free from dust as possible.
<b>Spill or Leak:</b> Shovel into disposal containers to cover with tarp. For landfill disposal, mix with limestone 3 times the weight of sulphur
<b>Special Precautions/Procedures/Label Instructions:</b> Eye wash equipment near the work area.