

GHS Material Safety Data Sheet

MSDS No. : SSE01PAEG

Date Issued: 2012/12/14

Section 1. Identification of the substance or mixture and of the supplier

1.1 Product Information

Product name: **S Sulfur**

| Product number: | Purity | Form | Size (mm) or Shape |
|-----------------|---------------|--------|--------------------|
| SSE01PB | 99% (2N)up | powder | — |
| SSE02PB | 99.99% (4N) | powder | 45 μ m pass |
| SSE01GB | 99% (2N)up | grains | — |
| SSE02GB | 99.99% (4N) | grains | — |
| SSE03GB | 99.999% (5N) | grains | — |
| SSE04GB | 99.9999% (6N) | grains | — |

1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.

1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284

Phone: +81-49-284-1511 Fax: +81-49-284-1351

Emergency Phone : +81-49-284-1511

Section 2. Hazards identification

GHS Classification

| Health Hazards | Environmental Hazards | Physical Hazards |
|--|---|--|
| Specific target organ toxicity, single exposure : Category 1 Specific target organ toxicity, repeated exposure : Category 2 | Hazardous to the aquatic environment, acute toxicity : Not classified | Flammable solids :Category 2. Pyrophoric solids : Not classified. |

GHS Label: F C



Pictograms or symbols

Warning word: **DANGER**

Hazard information

Flammable solid
Causes damage to organs (Respiratory tract)
May cause damage to organs (Respiratory system skin) through prolonged or repeated exposure.

Description of precaution

Keep away from heat/sparks/open flames/hot surfaces.-No smoking.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Take precautionary measures static discharge.
 Wear protective gloves/ protective clothing/ eye protection/ respiratory protection/ face protection during handling.
 Avoid breathing dust/ fume/ vapors. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling.
 In case of fire: Use < Dry chemical, CO₂, sand, water spray or regular foam > for extinction.
 Call a POISON CENTER or doctor/physician if you feel unwell.
 Store locked up.
 Dispose of contents/ container in accordance with local / national regulations.

Additional hazard information :

In case of fire, liberates corrosive and toxic gases/ fume.

With respect to additional hazard information, see Section 11.

Section 3. Composition / information on ingredients

| | |
|-------------------------------|------------------|
| Chemical or common name: | Sulfur |
| Chemical formula: | S |
| Single Substance or Compound: | Single substance |
| Composition: | 100% |
| CAS #: | 7704-34-9 |
| RTECS#: | WS4250000 |
| TSCA inventory: | listed |
| EINECS: | 2317226 |

Section 4. First aid measures

| | |
|---------------|--|
| Eye contact: | Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. |
| Skin contact: | Promptly flush contaminated skin with soap or mild detergent and water. Contact physician if irritation continues. |
| Inhalation: | Remove the exposed person immediately and provide fresh air. Get medical attention. |
| Ingestion: | Rinse mouth and throat with water. Get medical attention immediately. |

Section 5. Fire fighting measures

| | |
|---|---|
| Extinguishing media: | Dry chemical, CO ₂ , sand, water spray or regular foam. |
| Fire fighting: | Flammable material. Will be easily ignited by heat, sparks or flames. Remove containers to safe place if possible. Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire. |
| Explosion hazards: | Dust explosion: Fine powder forms explosive mixtures in air. |
| Specific hazards arising from the chemical: | In case of fire, liberates corrosive and toxic gases/ fume. |

Section 6. Accidental release measures

| | |
|---|---|
| Personal Precautions: | Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts. |
| Environmental hazard precautions: | Shut off leak if without risk. Prevent flow out to river, etc. so as not to badly affect. |
| Method for containment and cleaning up: | Avoid unnecessary contacts with spills. Avoid raising dust. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd. Gather up, pack in closed container as much as possible. Carefully collect remnant and move to a safe place. Carefully wash spill site with plenty of water after material pick up. |

Section 7. Handling and storage

Precautions to be taken in handling:

Safe handling: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.
 Avoid prolonged or repeated exposure.
 Keep away from heat, sparks and naked flame.
 Electrically ground all equipment when handling this material and use only non-sparking tools.
 Use explosion-proof electrical/ventilating/lighting equipment.

Precautions to be taken in storage:

General precautions: Store in a cool, dry place away from incompatible materials.
 Keep container or bottle tightly closed.
 Keep away from any heat, sparks, and flames.

Section 8. Exposure controls / personal protection

Exposure guideline: ACGIH(2012): No data available
 OSHA (2006): No data available

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, face shields, protective gloves.
 (In case of dust generating work.)
 Wear appropriate NIOSH/MSHA-approved respirator, air-supplied respirator, safety goggles, face shields, protective gloves, protective clothing, apron, including boots.

Section 9. Physical and chemical properties

Color and Form: Yellow solid, odorless.

Chemical formula: S

Atomic weight: 32.06

Melting point: 112.8 (), 119.0 ()

Boiling point: 444.7

Density: 2.07²⁰ g/cm³ (), 1.957²⁰ g/cm³ ()

Flash point: 207 (closed cup)

Ignition point: 232

Explosive limits: ca.35~1400g/m³

Water solubility: Insoluble

Flammable: Flammable substance

Oxidation: None

Section 10. Stability and reactivity

Stability: Stable in closed container.

Reactivity

Incompatibility: Oxidizing agents, oxidizing substances.

Condition to avoid: Moisture, air

Hazardous decomposition products.: Sulfur oxides

Section 11. Toxicological information

Hazards mainly originate in dusting.

| | |
|---|--|
| Acute toxicity: | GHS: Not classified.; Falls below the lowest level. Oral rat LD50 > 3000 mg/kg Dermal rat LD50 > 2000 mg/kg Inhalation rat LD50 > 9.23 mg/L (IUCALID(2000)) |
| Skin corrosive / irritation: | GHS : Not classified.; Falls below the lowest level. |
| Serious eyes damage / eye irritation: | GHS : Not classified.; Falls below the lowest level. |
| Respiratory sensitization: | GHS : No data available |
| Skin sensitization: | GHS : No data available |
| Germ cell mutagenicity: | GHS : No data available |
| Carcinogenicity: | GHS : No data available |
| Reproductive toxicity: | GHS : No data available |
| Specific target organ toxicity —single exposure: | GHS : Category 1 ; Causes damage to organs. (Respiratory tract) |
| Specific target organ toxicity —repeated exposure: | GHS : Category 2 May cause damage to organs (Respiratory system, skin) through prolonged or repeated exposure. |
| Aspiration hazard: | GHS : No data available |
| Other cautions: | Mechanical stimulation by dust affects eyes, skin and respiratory system |

Section 12. Ecological information

| | |
|------------------------------------|---|
| Ecotoxicity: | |
| Hazards to the aquatic environment | |
| —acute toxicity: | GHS : Not classified.; Falls below the lowest level. |
| —chronic toxicity: | GHS : No data available |
| Hazardous the ozone layer: | GHS : No data available No Freon or Halon |
| Fish toxicity: | S Crustacea(Mysid) LC50(96hr) = 736 mg/L (AQUIRE(2010)) |
| Degradability: | No data available |
| Bioaccumulative potential: | No data available |
| Mobility in soil: | No data available |

Section 13. Disposal considerations

| | |
|------------------|---|
| Disposal method: | User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste. |
|------------------|---|

Section 14. Transport information

| | |
|----------------------|--|
| UN number: | 1350 |
| IATA shipping name: | Sulphur |
| IATA classification: | Hazardous Class 4.1 (Flammable solids) |
| IATA packing group: | |
| HS code: | 2503.00 |
| Marine pollution: | No |

Section 15. Regulatory information

TSCA inventory : listed.

Please refer to any other local / national measures that may be relevant.

Section 16. Other information

The information described above is believed to be correct. However, Kojundo Chemical Lab. makes no representation, warranty nor guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.