## Section 1. Identification

**Product identifier**

**Product Identity** Prilled Sulfur (CHE-1120S)

**Other means of identification** Brimstone, Flowers of sulfur, Sulphur

**Relevant identified uses of the substance or mixture and uses advised against**

Manufacturing sulfuric acid, sulfur dioxide, fertilizer, carbon disulfide, plastics, enamels, vulcanizing rubber, synthesizing dyes, bleaching wood pulp.

**Restrictions on use:**
Not available.

**Details of the supplier of the safety data sheet**

**Company Name**

Chemtrade Logistics Inc. (Canada)
155 Gordon Baker Road Suite 300
Toronto, Ontario M2H 3N5
(416) 496-5856

Chemtrade Logistics Inc. (US)
90 East Halsey Road, Suite 200
Parsippany, NJ 07054
(800) 228- 8558

**Emergency**

**24 hour Emergency Telephone No.**

Chemtrade Emergency Contact: (866) 416-4404 (US and Canada)
CHEMTREC +1-800-424-9300
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

**Customer Service:**

For SDS Info: (416) 496-5856
www.chemtradelogistics.com

## Section 2. Hazard(s) identification

**Emergency Overview**

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)

**Classification of the substance or mixture**

Flammable Solid, category 2;H228 Flammable solid.

| | |
|---|---|
| Skin corrosion/irritation category 2;H315 | Causes skin irritation. |
| Aquatic toxicity (acute), category 3;H402 | Harmful to aquatic life. |
| Combustible Dust - Category 1 | May form combustible dust concentrations in air. |

**Label elements**

**Warning**

H228 Flammable solid.
H315 Causes skin irritation.
H402 Harmful to aquatic life.
May form combustible dust concentrations in air.

**[Prevention]:**
P210 Keep away from heat, sparks, open flames, and other ignition sources - No smoking.
P240 Ground, bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, light, equipment.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves, eye protection, and face protection.
**[Response]:**
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+312 IF INHALED: Call a poison center or doctor or physician if you feel unwell.
P332+313 If skin irritation occurs: Get medical attention.
P362+364 Take off contaminated clothing and wash it before reuse.
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.
**[Storage]:**
No GHS storage statements
**[Disposal]:**
P501 Dispose of contents or container in accordance with local and national regulations.

**Other hazards**

CONTAINS HYDROGEN SULFIDE. Product may contain significant quantities of dissolved hydrogen sulfide gas. H2S has a broad range of effects dependent on the airborne concentration and length of exposure: 0.02 ppm odor threshold, smell of rotten eggs; 10 ppm eye and respiratory tract irritation; 100 ppm coughing, headache, dizziness, nausea, eye irritation, loss of sense of smell in minutes; 200 ppm potential for pulmonary edema after >20-30 minutes; 500 ppm loss of consciousness after short exposures, potential for respiratory arrest; >1000 ppm immediate loss of consciousness, may lead rapidly to death, prompt cardiopulmonary resuscitation may be required. Do not depend on sense of smell for warning. H2S causes rapid olfactory fatigue (deadens sense of smell). There is no evidence that H2S will accumulate in the body tissue after repeated exposure.

May form combustible dust concentrations in air.

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.

Does NOT contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the US EPA PFASMASTER combined list of PFAS chemicals.

## Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Hazardous Products Regulations.

| Ingredient/Chemical Designations | Weight % | GHS Classification | Notes |
|---|---|---|---|
| **Sulfur**<br>**CAS Number: 7704-34-9**<br>**Synonyms: No available information** | **80 - 100** | **Skin corrosion/irritation category 2;H315**<br>**Flammable Solid, category 2;H228** | **No data available** |
| **Hydrogen sulfide**<br>**CAS Number: 7783-06-4**<br>**Synonyms: Dihydrogen monosulfide, Dihydrogen sulfide** | **0.5 - 1.5** | **Flammable Gas, category 1;H220**<br>**Gas under pressure;H280**<br>**Acute toxicity(inhalation), category 2:H330**<br>**Aquatic toxicity (acute), category 1;H400** | **No data available** |

The actual concentration or concentration range is withheld as a trade secret.
*PBT/vPvB - PBT, vPvM or vPvB-substance.
The full texts of the phrases are shown in Section 16.

The specific chemical identity and/or exact percentage of composition are withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

## Section 4. First aid measures

**Description of first aid measures**

**General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

| | |
|---|---|
| **Eyes** | Irrigate copiously with clean water for at least 30 minutes, holding the eyelids apart and seek medical attention. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **Skin** | Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Drench affected area with water for at least 30 minutes. Obtain medical attention if irritation develops or persists. |
| **Ingestion** | If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. |

**Most important symptoms and effects, both acute and delayed**

| | |
|---|---|
| **Overview** | CONTAINS HYDROGEN SULFIDE. Product may contain significant quantities of dissolved hydrogen sulfide gas. H2S has a broad range of effects dependent on the airborne concentration and length of exposure: 0.02 ppm odor threshold, smell of rotten eggs; 10 ppm eye and respiratory tract irritation; 100 ppm coughing, headache, dizziness, nausea, eye irritation, loss of sense of smell in minutes; 200 ppm potential for pulmonary edema after >20-30 minutes; 500 ppm loss of consciousness after short exposures, potential for respiratory arrest; >1000 ppm immediate loss of consciousness, may lead rapidly to death, prompt cardiopulmonary resuscitation may be required. Do not depend on sense of smell for warning. H2S causes rapid olfactory fatigue (deadens sense of smell). There is no evidence that H2S will accumulate in the body tissue after repeated exposure.<br>**Acute Health Effects:** Causes skin irritation.<br>**Inhalation:** Prolonged exposure may cause irritation. Dust may be harmful or cause irritation. WARNING: irritating and toxic hydrogen sulfide gas may be present.<br>**Skin Contact:** Causes skin irritation and contact may result in redness, pain, swelling, itching, burning, dryness, and dermatitis.<br>**Eye Contact:** May cause slight irritation to eyes.<br>**Ingestion:** Ingestion may cause adverse effects.<br>This product contains Hydrogen sulfide which may accumulate in confined spaces. Inhalation of Hydrogen sulphide may cause loss of sense of smell, major irritation of the respiratory tract, headache, nausea, vomiting, dizziness, and fluid buildup in the lungs (pulmonary edema), which can be fatal. At 300 ppm unconsciousness may occur after 20 minutes. From 300 to 500 ppm, death can occur within minutes of continuous exposure. Above 500 ppm Hydrogen sulphide may cause instantaneous loss of consciousness and immediate death. See section 2 for further details. |
| **Skin** | Causes skin irritation. |
| **Chronic effects** | Hydrogen Sulfide (H2S) is a mucous membrane and respiratory tract irritant; pulmonary edema, which may be immediate or delayed, can occur after exposure to high concentrations. Symptoms of acute exposure include nausea, headaches, delirium, disturbed equilibrium, tremors, convulsions, and skin and eye irritation. |

Inhalation of high concentrations of hydrogen sulfide can produce extremely rapid unconsciousness and death.

## Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable extinguishing media:** Do not use water jet, or heavy water stream. Use of heavy stream of water may spread fire.

**Special hazards arising from the substance or mixture**

Hazardous decomposition: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Explosion:** Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

Ground, bond container and receiving equipment.

Use explosion-proof electrical, ventilating, light, equipment.

**Advice for fire-fighters**

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full-face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean up immediately after fire. No smoking.

**Fire Hazard:** Combustible Dust. Dust generated from processing may present a dust explosion hazard.

**Explosion Hazard:** If excessive dust is generated from processing, it may present a dust explosion hazard when dispersed in air at sufficient quantities in the presence of an ignition source.

**Firefighting Instructions:** Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. **Exercise caution when fighting any chemical fire.**

**Hazardous Combustion Products:** Sulfur dioxide. Sulphur oxides. May liberate toxic gases.

**Other Information:** If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas. Do not allow run-off from fire-fighting to enter drains or water courses.

**ERG Guide No.** NA

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**General Measures:** Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid contact with eyes, skin and clothing. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. See Section 8.

Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Nonsparking tools should be used.

Use only outdoors or in a well-ventilated area. Do not breathe mist, spray, and vapours.

Do not get in eyes, on skin, or on clothing. Use appropriate personal protection equipment (PPE). Wear protective gloves, eye protection, face protection (refer to section 8 for more details).

Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Promptly remove soiled clothing and wash thoroughly before reuse.

**Environmental precautions**

**Explosion:** Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Prevent entry to sewers and public waters. Avoid release to environment.

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

**Methods and material for containment and cleaning up**

Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Ventilate area.

Sweep or vacuum to clean up spills. Do not use any procedure which causes dispersion of dust into the air if any possibility of ignition exists. Dispose of in accordance with local, state and federal regulations.

**Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Equip cleanup crew with proper protection.

## Section 7. Handling and storage

**Precautions for safe handling**

Handle containers carefully to prevent damage and spillage.

Avoid dust generation when handling product to minimize dust explosion potential.

Use only outdoors or in a well-ventilated area. Do not breathe mist, spray, and vapours.

Do not get in eyes, on skin, or on clothing. Use appropriate personal protection equipment (PPE). Wear protective gloves, eye protection, face protection (refer to section 8 for more details).

Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

**Conditions for safe storage, including any incompatibilities**

Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials.

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

**Incompatible materials**: Strong acids, strong bases, strong oxidizers. carbides, chlorates, nitrates, halogens, phosphorous, heavy metals.

**Special Rules on Packaging:** Contains sulfur, may release small amounts of hydrogen sulfide. Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide.

See section 2 for further details. - [Storage]:

**Specific end use(s)**

Manufacturing sulfuric acid, sulfur dioxide, fertilizer, carbon disulfide, plastics, enamels, vulcanizing rubber, synthesizing dyes, bleaching wood pulp.

**Restrictions on use:**

Not available.

## Section 8. Exposure controls / personal protection

### Control parameters

**Exposure Limits**

| CAS No. | Ingredient | Source | Value |
|---|---|---|---|
| 7704-34-9 | Sulfur | ACGIH | No Established Limit |
| | | OSHA | No Established Limit |
| | | NIOSH | No Established Limit |
| | | Alberta | 10 mg/m³ TWA |
| | | British Columbia | No Established Limit |
| | | Manitoba | No Established Limit |
| | | New Brunswick | No Established Limit |
| | | Newfoundland and Labrador | No Established Limit |

| | | | |
|---|---|---|---|
| | | Nova Scotia | No Established Limit |
| | | Northwest Territories | No Established Limit |
| | | Nunavut | No Established Limit |
| | | Ontario | No Established Limit |
| | | Prince Edward Island | No Established Limit |
| | | Quebec | No Established Limit |
| | | Saskatchewan | No Established Limit |
| | | Yukon | No Established Limit |
| 7783-06-4 | Hydrogen sulfide | ACGIH | 1 ppm 5 ppm |
| | | OSHA | C 20 ppm, Max above C: 50 ppm 10 mins once |
| | | NIOSH | C 10 ppm (15 mg/m$^3$) [10-minute] |
| | | Alberta | 10 ppm TWA; 14 mg/m$^3$ TWA |
| | | British Columbia | C 10 ppm |
| | | Manitoba | 1 ppm TWA 5 ppm STEL |
| | | New Brunswick | 10 ppm TWA; 14 mg/m$^3$ TWA 15 ppm STEL; 21 mg/m$^3$ STEL |
| | | Newfoundland and Labrador | 1 ppm TWA 5 ppm STEL |
| | | Nova Scotia | 1 ppm TWA 5 ppm STEL |
| | | Northwest Territories | 10 ppm TWA 15 ppm STEL |
| | | Nunavut | 10 ppm TWA 15 ppm STEL |
| | | Ontario | 10 ppm TWA 15 ppm STEL |
| | | Prince Edward Island | 1 ppm TWA 5 ppm STEL |
| | | Quebec | 10 ppm TWAEV; 14 mg/m$^3$ TWAEV 15 ppm STEV; 21 mg/m$^3$ STEV |
| | | Saskatchewan | 10 ppm TWA 15 ppm STEL |
| | | Yukon | 10 ppm TWA; 15 mg/m$^3$ TWA 15 ppm STEL; 27 mg/m$^3$ STEL |

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m$^3$ (50 mppcf*) TWA, ACGIH 10 mg/m$^3$.

**Exposure controls**

**Respiratory** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Eyes** Chemical safety goggles

**Skin** Wear chemical and fire-resistant gloves. Wear chemical and fire-resistant clothing. **Where higher splash potential exists** (e.g. loading, unloading, line breaking), wear hard hat and SCBA (Self Contained Breathing Apparatus) chemical splash shroud, fire resistant jacket and plants or bib overalls. Chemical and fire-resistant gloves.

**Engineering Controls** It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen- deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust

| | |
|---|---|
| | collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks. |
| **Other Work Practices** | Wear chemical and fire-resistant clothing. **Where higher splash potential exists** (e.g. loading, unloading, line breaking), wear hard hat and SCBA (Self Contained Breathing Apparatus) chemical splash shroud, fire resistant jacket and plants or bib overalls. Chemical and fire-resistant gloves. Use only outdoors or in a well-ventilated area. Do not breathe mist, spray, and vapours.<br>Do not get in eyes, on skin, or on clothing. Use appropriate personal protection equipment (PPE). Wear protective gloves, eye protection, face protection (refer to section 8 for more details).<br>Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Promptly remove soiled clothing and wash thoroughly before reuse. |

See section 2 for further details.

## Section 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical State** | Solid |
| **Color** | Opaque liquid when shipped, brittle solid below melting point. Bright yellow to brown. |
| **Odor** | Smells like rotten eggs. |
| **Odor threshold** | No available information |
| **Melting point / freezing point** | 114 - 119 °C (237.2 - 246.2 °F) |
| **Initial boiling point and boiling range** | 444.6 °C (832.28 °F) |
| **Flammability (solid, gas)** | Solid |
| **Upper/lower flammability or explosive limits** | Lower Explosive Limit: 4%<br>Upper Explosive Limit: 44% |
| **Flash Point** | 207 °C (404.6 °F) Pensky-Martens Closed Cup |
| **Auto-ignition temperature** | 232 °C (449.6 °F) |
| **Decomposition temperature** | No available information |
| **pH** | No available information |
| **Viscosity (cSt)** | No available information |
| **Solubility in Water** | Water: Insoluble Organic solvent: Soluble in carbon disulfide, benzene, toluene, chloroform, ether, warm aniline, carbon tetrachloride and liquid ammonia. |

| | |
|---|---|
| **Partition coefficient n-octanol/water (Log Kow)** | No available information |
| **Vapour pressure (Pa)** | 0.015 kPa (0.11 mm Hg) |
| **Relative Density** | 1.79 |
| **Vapour Density** | 3.64 [Air = 1] |
| **Particle Characteristics** | No available information |
| **Evaporation rate (Ether = 1)** | No available information |
| | Dust hazard explosive |
| **Specific Gravity** | 1.79 |

**Other information**

No other relevant information.

## Section 10. Stability and reactivity

**Reactivity**

Hazardous reactions will not occur under normal conditions

**Chemical stability**

Stable under recommended handling and storage conditions (see section 7).

**Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**Conditions to avoid**

Extremely high or low temperatures and incompatible materials. Sparks, heat, open flame and other sources of ignition. Dust accumulation (to minimize explosion hazard).

**Incompatible materials**

Strong acids, strong bases, strong oxidizers. carbides, chlorates, nitrates, halogens, phosphorous, heavy metals.

**Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Acute toxicity**

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

| | Oral LD50, mg/kg | Skin LD50, mg/kg | Inhalation Vapor LC50, mg/L/4hr | Inhalation Dust/Mist LC50, mg/L/4hr | Inhalation Gas LC50, ppm |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Product Acute Toxicity Estimates** | NA | NA | NA | 6 | NA |

| Ingredient | Oral LD50, mg/kg | Skin LD50, mg/kg | Inhalation Vapor LC50, mg/L/4hr | Inhalation Dust/Mist LC50, mg/L/4hr | Inhalation Gas LC50, ppm |
|---|---|---|---|---|---|
| Sulfur - (7704-34-9) | > 2,000.00, Rat - Category: NA | > 2,000.00, Rat - Category: NA | No data available. | > 5.43, Rat - Category: NA | No data available. |
| Hydrogen sulfide - (7783-06-4) | No data available. | No data available. | No data available. | No data available. | 444.00, Rat - Category: 2 |

## Carcinogen Data

| CAS No. | Ingredient | Source | Value |
|---|---|---|---|
| 7704-34-9 | Sulfur | IARC | No |
| | | ACGIH | No Established Limit |
| 7783-06-4 | Hydrogen sulfide | IARC | No |
| | | ACGIH | No Established Limit |

| Classification | Category | Hazard Description |
|---|---|---|
| Acute toxicity (oral) | --- | Not Applicable |
| Acute toxicity (dermal) | --- | Not Applicable |
| Acute toxicity (inhalation) | --- | Not Applicable |
| Skin corrosion/irritation | 2 | Causes skin irritation. |
| Serious eye damage/irritation | --- | Not Applicable |
| Respiratory sensitization | --- | Not Applicable |
| Skin sensitization | --- | Not Applicable |
| Germ cell mutagenicity | --- | Not Applicable |
| Carcinogenicity | --- | Not Applicable |
| Reproductive toxicity | --- | Not Applicable |
| STOT-single exposure | --- | Not Applicable |
| STOT-repeated exposure | --- | Not Applicable |
| Aspiration hazard | --- | Not Applicable |

**Possible routes of entry:**
Inhalation, ingestion, skin contact, and skin absorption.

**Symptoms and effects, both acute and delayed:**
CONTAINS HYDROGEN SULFIDE. Product may contain significant quantities of dissolved hydrogen sulfide gas. H2S has a broad range of effects dependent on the airborne concentration and length of exposure: 0.02 ppm odor threshold, smell of rotten eggs; 10 ppm eye and respiratory tract irritation; 100 ppm coughing, headache, dizziness, nausea, eye irritation, loss of sense of smell in minutes; 200 ppm potential for pulmonary edema after >20-30 minutes; 500 ppm loss of consciousness after short exposures, potential for respiratory arrest; >1000 ppm immediate loss of consciousness, may lead rapidly to death, prompt cardiopulmonary resuscitation may be required. Do not depend on sense of smell for warning. H2S causes

rapid olfactory fatigue (deadens sense of smell). There is no evidence that H2S will accumulate in the body tissue after repeated exposure.
**Acute Health Effects:** Causes skin irritation.
**Inhalation:** Prolonged exposure may cause irritation. Dust may be harmful or cause irritation. WARNING: irritating and toxic hydrogen sulfide gas may be present.
**Skin Contact:** Causes skin irritation and contact may result in redness, pain, swelling, itching, burning, dryness, and dermatitis.
**Eye Contact:** May cause slight irritation to eyes.
**Ingestion:** Ingestion may cause adverse effects.
This product contains Hydrogen sulfide which may accumulate in confined spaces. Inhalation of Hydrogen sulphide may cause loss of sense of smell, major irritation of the respiratory tract, headache, nausea, vomiting, dizziness, and fluid buildup in the lungs (pulmonary edema), which can be fatal. At 300 ppm unconsciousness may occur after 20 minutes. From 300 to 500 ppm, death can occur within minutes of continuous exposure. Above 500 ppm Hydrogen sulphide may cause instantaneous loss of consciousness and immediate death.

| | |
|---|---|
| **Skin** | Causes skin irritation. |
| **Chronic effects** | Hydrogen Sulfide (H2S) is a mucous membrane and respiratory tract irritant; pulmonary edema, which may be immediate or delayed, can occur after exposure to high concentrations. Symptoms of acute exposure include nausea, headaches, delirium, disturbed equilibrium, tremors, convulsions, and skin and eye irritation. Inhalation of high concentrations of hydrogen sulfide can produce extremely rapid unconsciousness and death. |

## Section 12. Ecological information

**Toxicity**

**Aquatic Ecotoxicity**

| Ingredient | 96 hr LC50 fish, mg/l | 48 hr EC50 crustacea, mg/l | ErC50 algae, mg/l |
|---|---|---|---|
| Sulfur - (7704-34-9) | No data available. | > 0.01, Daphnia magna | No data available. |
| Hydrogen sulfide - (7783-06-4) | No data available. | No data available. | No data available. |

**Persistence and degradability**
There is no data available on the preparation itself.
**Bioaccumulative potential**
No available information
**Mobility in soil**
No available information
**Results of PBT and vPvB assessment**
This product contains no PBT/vPvB/vPvM chemicals.

**Other adverse effects**

No available information

## Section 13. Disposal considerations

**Waste treatment methods**

Dispose of waste material in accordance with all local, regional, federal, provincial, state, territorial and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**Additional Information:** Container may remain hazardous when empty. Continue to observe all precautions.

## Section 14. Transport information

**DOT**: Solid sulfur is not subject to the requirements of title 49 CFR hazardous materials shipping guidelines if transported in a non-bulk packaging (less than 400 kg per package) or is formed to a specific shape (e.g., prills, granules, pellets, pastilles, or flakes). Based upon results of tests, it is determined that formed sulphur does not meet the criteria for classification in Class 4.1.

**TDG**: Solid sulfur is not subject to the requirements of the TDG code if transported in a non-bulk packaging (less than 400 kg per package) or is formed to a specific shape (e.g., prills, granules, pellets, pastilles, or flakes). Based upon results of tests, it is determined that formed sulphur does not meet the criteria for classification in Class 4.1.

**IMDG**: Solid sulfur is not subject to the requirements of the IMDG code if formed to a specific shape (e.g., prills, granules, pellets, pastilles, or flakes). Based upon results of tests, it is determined that formed sulphur does not meet the criteria for classification in Class 4.1.

**IATA**: Solid sulfur is not subject to the requirements of IATA formed to a specific shape (e.g., prills, granules, pellets, pastilles, or flakes). Based upon results of tests, it is determined that formed sulphur does not meet the criteria for classification in Class 4.1.

Classification Method: Classified as per Part 2, Sections 2.1-2.8 of the Transportation of Dangerous Goods Regulations.

| DOT (Domestic Surface Transportation) | |
|---|---|
| **UN number** | Not Regulated |
| **UN proper shipping name** | Not Regulated |
| **Transport hazard class(es)** | Not Applicable |
| **Sub Class** | Not Applicable |
| **Packing group** | Not Applicable |

| TDG (Domestic Surface Transportation) | |
|---|---|
| **UN number** | Not Regulated |
| **UN proper shipping name** | Not Regulated |
| **Transport hazard class(es)** | Not Applicable |
| **Sub Class** | Not Applicable |
| **Packing group** | Not Applicable |

| IMO / IMDG (Ocean Transportation) | |
|---|---|
| **UN number** | Not Regulated |
| **UN proper shipping name** | Not Regulated |
| **Transport hazard class(es)** | Not Applicable |
| **Sub Class** | Not Applicable |
| **Packing group** | Not Applicable |

| ICAO/IATA | |
|---|---|
| **UN number** | Not Regulated |
| **UN proper shipping name** | Not Regulated |
| **Transport hazard class(es)** | Not Applicable |
| **Sub Class** | Not Applicable |
| **Packing group** | Not Applicable |

**Environmental hazards**

IMDG Marine Pollutant: ;

**Special precautions for user**

No available information

## Section 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

**Toxic Substance Control Act (TSCA)** All components of this material are either listed or exempt from listing on the TSCA Inventory.

**NFPA Ranking**

Health (blue) :2
Fire (red) :3
Reactivity (yellow) :0
Special (white) :--

**Toxic Substance Control Act (TSCA)**

Hydrogen sulfide

Sulfur

**CERCLA Chemicals and RQs (lbs):**

Hydrogen sulfide ( 100.00)

**EPCRA 302 Extremely Hazardous:**

Hydrogen sulfide

**EPCRA 313 Toxic Chemicals:**

Hydrogen sulfide

**Canadian Domestic Substance List (DSL):**

Hydrogen sulfide

Sulfur

**Canadian Non-Domestic Substance List (NDSL):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**New Jersey RTK Substances (>1%):**

Hydrogen sulfide

Sulfur

**Pennsylvania RTK Substances (>1%):**

Hydrogen sulfide

Sulfur

**Proposition 65 - Carcinogens (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Female Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 Label Warning:**

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

| Chemical Name (CAS Number) | US TSCA | Australia AICS | Korea ECL | EU EINECS | EU ELINCS | EU SVHC | EN NLP | Mexico INSQ |
|---|---|---|---|---|---|---|---|---|
| Sulfur (7704-34-9) | Yes | Yes | Yes | Yes | No | No | No | Yes |
| Hydrogen sulfide (7783-06-4) | Yes | Yes | Yes | Yes | No | No | No | Yes |

| Chemical Name (CAS Number) | China IECSC | Japan ENCS | Japan ISHL | Japan PDSCL | Japan PRTR 1 | Japan PRTR 2 | Philippines PICCS | New Zealand NZIOC |
|---|---|---|---|---|---|---|---|---|
| Sulfur (7704-34-9) | Yes | No | No | No | No | No | Yes | Yes |
| Hydrogen sulfide (7783-06-4) | Yes | Yes | Yes | No | No | No | Yes | Yes |

## Section 16. Other information

**Revision Date** 11/27/2025

**Revision Number** 3

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

The full text of the phrases appearing in section 3 is:

H220 Extremely flammable gas.

H228 Flammable solid.

H280 Contains gas under pressure; may explode if heated.

H315 Causes skin irritation.

H330 Fatal if inhaled.

H400 Very toxic to aquatic life.

Disclaimer: The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

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