

Sulfur

Safety Data Sheet SDS No: 6192 According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations Revision Date: 10/23/2018 Date of Issue: 08/30/2012

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier Product Form: Mixture Product Name: Sulfur Synonyms: Brimstone, Sulfur

1.2. Intended Use of the Product

Hydrogen sulfide may be present in trace quantities (by weight) in molten sulfur but may accumulate to toxic or flammable concentrations in enclosed spaces such as molten sulfur storage pits, tanks, or tanker/railcar headspaces. Hydrogen sulfide is not considered a hazard associated with solid sulfur.

1.3. Name, Address, and Telephone of the Responsible Party

Customer Hess Tower 1501 McKinney Houston, TX 77010 T:(713) 496-4000

When calling the main operator ask for the EHS Safety Department. All Hess SDSs are also available via the <u>Hess.com</u> website.

1.4. Emergency Telephone Number

Emergency Number : (800) 424-9300 CHEMTREC (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

| SECTION 2: MAZARDS IDENTIFICA | nion |
|--|--|
| 2.1. Classification of the Substa | nce or Mixture |
| GHS-US Classification | |
| Flam. Sol. 2 H228 | |
| Skin Irrit. 2 H315 | |
| Aquatic Acute 2 H401 | |
| Comb. Dust | |
| Full text of hazard classes and H-statem | ients : see Section 16. |
| 2.2. Label Elements | |
| GHS-US Labeling | |
| Hazard Pictograms (GHS-US) | |
| | |
| | |
| | |
| Signal Ward (CUS US) | GH502 GH507 |
| Signal Word (GHS-US) | : Warning |
| Hazard Statements (GHS-US) | : May form combustible dust concentrations in air. H228 - Flammable solid. |
| | |
| | H315 - Causes skin irritation. |
| Dressutioner: Statements (CUS US) | H401 - Toxic to aquatic life. |
| Precautionary Statements (GHS-US) | |
| | P240 - Ground/Bond container and receiving equipment. |
| | P241 - Use explosion-proof electrical, ventilating, and lighting equipment. |
| | P264 - Wash hands, forearms, and other exposed areas thoroughly after handling. P273 - Avoid release to the environment. |
| | P280 - Wear gloves, protective clothing, eye protection, face protection. |
| | P302+P352 - If on skin: Wash with plenty of water. |
| | P302+P352 - If on skin, wash with plenty of water. P321 - Specific treatment (see Section 4 on this SDS). |
| | P321 - Specific treatment (see Section 4 on this SDS). P332+P313 - If skin irritation occurs: Get medical advice/attention. |
| | |

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P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use appropriate media to extinguish. P501 - Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

2.3. Other Hazards

N /1:-----

2 2

Risk of thermal burns on contact with molten product. Molten when shipped above melting point 113°C (235 °F), brittle solid below melting point. Solid particles of sulfur present a combustible dust hazard, and in the right conditions can cause an explosion with sparks, or an ignition source. Product is heated when in molten form, and in contact with an ignition source may present a fire or explosion hazard. Keep product away from sparks, open flames, incompatibilities, and all ignition sources. 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. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Name | Product Identifier | % (w/w) | GHS-US classification |
|------------------|---------------------|---------|-------------------------------------|
| Sulfur | (CAS-No.) 7704-34-9 | 100 | Skin Irrit. 2, H315 |
| | | | Aquatic Acute 3, H402 |
| | | | Comb. Dust |
| Hydrogen sulfide | (CAS-No.) 7783-06-4 | < 1 | Flam. Gas 1, H220 |
| | | | Press. Gas (Liq.), H280 |
| | | | Acute Tox. 2 (Inhalation:gas), H330 |
| | | | Eye Irrit. 2A, H319 |
| | | | STOT SE 3, H335 |
| | | | Aquatic Acute 1, H400 |

Full text of H-phrases: see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes skin irritation. Risk of thermal burns on contact with molten product.

Inhalation: WARNING: irritating and toxic hydrogen sulfide gas may be present. Greater than 15-20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid unconsciousness and death if not promptly revived.

Skin Contact: Causes skin irritation. Risk of thermal burns on contact with molten product. Removal of solidified molten material from skin requires medical assistance. Contact with hot, molten metal will cause thermal burns.

Eye Contact: Risk of thermal burns on contact with molten product. May cause eye irritation.

Ingestion: Abdominal pain. May cause nausea, vomiting, and diarrhea. Ingestion is likely to be harmful or have adverse effects. **Chronic Symptoms:** None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

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If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use fire extinguisher with class B rating.

Unsuitable Extinguishing Media: Do not use direct water on the burning/molten product; they could cause a steam explosion and spread of the fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable solid with a relatively low ignition temperature. Sulfur dust ignites easily in air. Grinding sulfur may produce an explosion hazard. Static discharge may ignite sulfur dust.

Sulfur burns with a pale blue flame that may be difficult to see in daylight. Burning sulfur will flow and emits large quantities of sulfur dioxide, a toxic, irritating and suffocating gas that can cause severe lung damage and death.

Molten sulfur may evolve hydrogen sulfide. Hydrogen sulfide is a flammable gas and may present an explosion hazard in a confined space. Under certain conditions, hydrogen sulfide can react to form pyrophoric iron compounds in enclosed spaces, such as sulfur pits.

Explosion Hazard: May form flammable/explosive vapor-air mixture. Combustible materials/Substances liable to spontaneous combustion.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. **Hazardous Combustion Products**: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Avoid generating dust. Do not allow product to spread into the environment. Avoid all contact with skin, eyes, or clothing. Avoid breathing dust.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

6.2. Environmental Precautions

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

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Eliminate all ignition sources. In case of fire: Stop leak if safe to do so. If melted: allow liquid to solidify before taking it up. Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Use only non-sparking tools.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Avoid dust production. Risk of thermal burns on contact with molten product. Do not pressurize, cut, or weld containers. 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 should not be used as an indicator for the presence of gas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Prevent build-up of electrostatic charges (e.g, by grounding). Ground/bond container and receiving equipment. Handling this product may result in electrostatic accumulation. Use proper grounding procedures.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials. Sparks, heat, open flame and other sources of ignition.

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

7.3. Specific End Use(s)

Hydrogen sulfide may be present in trace quantities (by weight) in molten sulfur but may accumulate to toxic or flammable concentrations in enclosed spaces such as molten sulfur storage pits, tanks, or tanker/railcar headspaces. Hydrogen sulfide is not considered a hazard associated with solid sulfur.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

| Sulfur (7704-34-9) | | | |
|-----------------------------|--|--|--|
| Alberta | OEL TWA (mg/m³) | 10 mg/m ³ | |
| Hydrogen sulfide (7783-06-4 | Hydrogen sulfide (7783-06-4) | | |
| USA ACGIH | ACGIH TWA (ppm) | 1 ppm | |
| USA ACGIH | ACGIH STEL (ppm) | 5 ppm | |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 20 ppm | |
| USA OSHA | Acceptable Maximum Peak Above The | 50 ppm Peak (10 minutes once, only if no other | |
| | Acceptable Ceiling Concentration For An | measurable exposure occurs) | |
| | 8-Hr Shift | | |
| USA NIOSH | NIOSH REL (ceiling) (mg/m ³) | 15 mg/m ³ | |
| USA NIOSH | NIOSH REL (ceiling) (ppm) | 10 ppm | |
| USA IDLH | US IDLH (ppm) | 100 ppm | |
| Alberta | OEL Ceiling (mg/m ³) | 21 mg/m³ | |
| Alberta | OEL Ceiling (ppm) | 15 ppm | |
| Alberta | OEL TWA (mg/m³) | 14 mg/m³ | |
| Alberta | OEL TWA (ppm) | 10 ppm | |
| British Columbia | OEL Ceiling (ppm) | 10 ppm | |
| Manitoba | OEL STEL (ppm) | 5 ppm | |
| Manitoba | OEL TWA (ppm) | 1 ppm | |
| New Brunswick | OEL STEL (mg/m³) | 21 mg/m ³ | |
| New Brunswick | OEL STEL (ppm) | 15 ppm | |
| New Brunswick | OEL TWA (mg/m³) | 14 mg/m ³ | |
| New Brunswick | OEL TWA (ppm) | 10 ppm | |
| Newfoundland & Labrador | OEL STEL (ppm) | 5 ppm | |
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| Newfoundland & Labrador | OEL TWA (ppm) | 1 ppm |
|-------------------------|---------------------------|----------------------|
| Nova Scotia | OEL STEL (ppm) | 5 ppm |
| | | |
| Nova Scotia | OEL TWA (ppm) | 1 ppm |
| Nunavut | OEL STEL (ppm) | 15 ppm |
| Nunavut | OEL TWA (ppm) | 10 ppm |
| Northwest Territories | OEL STEL (ppm) | 15 ppm |
| Northwest Territories | OEL TWA (ppm) | 10 ppm |
| Ontario | OEL STEL (ppm) | 15 ppm |
| Ontario | OEL TWA (ppm) | 10 ppm |
| Prince Edward Island | OEL STEL (ppm) | 5 ppm |
| Prince Edward Island | OEL TWA (ppm) | 1 ppm |
| Québec | VECD (mg/m ³) | 21 mg/m ³ |
| Québec | VECD (ppm) | 15 ppm |
| Québec | VEMP (mg/m ³) | 14 mg/m³ |
| Québec | VEMP (ppm) | 10 ppm |
| Saskatchewan | OEL STEL (ppm) | 15 ppm |
| Saskatchewan | OEL TWA (ppm) | 10 ppm |
| Yukon | OEL STEL (mg/m³) | 27 mg/m³ |
| Yukon | OEL STEL (ppm) | 15 ppm |
| Yukon | OEL TWA (mg/m³) | 15 mg/m³ |
| Yukon | OEL TWA (ppm) | 10 ppm |

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment: Gloves. Protective clothing. Respiratory protection of the dependent type. Protective goggles.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing. Wear thermally protective clothing when handling product in significant amounts.

Hand Protection: Wear chemically resistant protective gloves. Insulated gloves.

Eye and Face Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection.

Thermal Hazard Protection: When working with hot material, use suitable thermally protective clothing.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| 9.1. Information on Basic Physical and Chemical Properties | | |
|--|--|--|
| Physical State | : Solid | |
| Appearance | : Yellow solid in clock or pellet form; easily crushed into yellow dust. Hot, yellow liquid. | |
| Odor | : Odorless (pure sulfur) / Rotten egg with trace hydrogen sulfide | |
| Odor Threshold | : Not available | |
| рН | : Not determined | |
| Evaporation Rate | : Not determined | |
| Melting Point | : 235 - 248 °F (112.78 - 120 °C) | |

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|--|-------|--|
| Freezing Point | : | Not available |
| Boiling Point | : | 832 °F (444.44 °C) |
| Flash Point | : | 405 °F (207 °C) (ASTM D-93) |
| Auto-ignition Temperature | : | 450 °F (232 °C) |
| Decomposition Temperature | : | Not available |
| Flammability (solid, gas) | : | Not available |
| Lower Flammable Limit | : | 35 gm/m3 (dust); 4% for hydrogen sulfide |
| Upper Flammable Limit | : | 1,400 gm/m3 (dust); 44% for hydrogen sulfide |
| Vapor Pressure | : | 4 x 10 ⁻⁶ mm HG @ 86 °F (30 °C) |
| Relative Vapor Density at 20°C | : | Not available |
| Relative Density | : | Not available |
| Specific Gravity | : | AP 1.96 |
| Solubility | : | Water: Insoluble |
| Partition Coefficient: N-Octanol/Water | : | Not determined |
| Viscosity | : | Not available |
| Explosion Data - Sensitivity to Mechanical Impact | : | Not expected to present an explosion hazard due to mechanical impact |
| Explosion Data - Sensitivity to Static Discharge | : | Not expected to present an explosion hazard due to static discharge |
| VOC Content | : | Not determined |
| | | |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Flammable solid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, open flame, overheating, heat, sparks, avoid ignition sources and incompatible materials.

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

10.6. Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Not classified LD50 and LC50 Data: Not available

LDSU and LCSU Data. Not available

Skin Corrosion/Irritation: Causes skin irritation.

pH: Not determined

Serious Eye Damage/Irritation: Not classified

pH: Not determined

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: WARNING: irritating and toxic hydrogen sulfide gas may be present. Greater than 15-20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid unconsciousness and death if not promptly revived. **Symptoms/Injuries After Skin Contact:** Causes skin irritation. Risk of thermal burns on contact with molten product. Removal of solidified molten material from skin requires medical assistance. Contact with hot, molten metal will cause thermal burns.

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Symptoms/Injuries After Eye Contact: Risk of thermal burns on contact with molten product. May cause eye irritation.

Symptoms/Injuries After Ingestion: Abdominal pain. May cause nausea, vomiting, and diarrhea. Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| Sulfur (7704-34-9) | | |
|------------------------------|----------------|--|
| LD50 Oral Rat | > 3000 mg/kg | |
| LD50 Dermal Rabbit | > 2000 mg/kg | |
| LC50 Inhalation Rat | > 9.23 mg/l/4h | |
| Hydrogen sulfide (7783-06-4) | | |
| LC50 Inhalation Rat | 444 ppm/4h | |
| | | |

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Toxic to aquatic life.

| Sulfur (7704-34-9) | | |
|---|--|--|
| LC50 Fish 1 | 866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static]) | |
| EC50 Daphnia 1 | a 1 736 mg/l (Exposure time: 48 h - Species: Daphnia magna) | |
| LC50 Fish 2 | 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static]) | |
| Hydrogen sulfide (7783-06-4) | | |
| LC50 Fish 1 0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through]) | | |
| LC50 Fish 2 | 0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) | |
| | | |

12.2. Persistence and Degradability

Not available

12.3. Bioaccumulative Potential

| Sulfur | | |
|--|-------------------------------|--|
| Bioaccumulative Potential Not established. | | |
| Hydrogen sulfide (7783-06-4) | | |
| BCF Fish 1 | (no bioaccumulation expected) | |
| Log Pow | 0.45 (at 25 °C) | |

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

| Proper Shipping Name | : SULFUR |
|-----------------------|----------|
| Hazard Class | : 4.1 |
| Identification Number | : UN1350 |
| Label Codes | : 4.1 |
| Packing Group | : 111 |

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| 14.2. In Accordance with IMDG | | | |
|-------------------------------|-------------------------------|--|--|
| Proper Shipping Name | : SULFUR | | |
| Hazard Class | : 4.1 | | |
| Division | : 4.1 | | |
| Identification Number | : UN1350 | | |
| Packing Group | : 111 | | |
| Label Codes | : 4.1 | | |
| EmS-No. (Fire) | : F-A | | |
| EmS-No. (Spillage) | : S-G | | |
| MFAG Number | : 133 | | |
| 14.3. In Accordance with | 14.3. In Accordance with IATA | | |
| Proper Shipping Name | : SULFUR | | |
| Packing Group | : 111 | | |
| Identification Number | : UN1350 | | |
| Hazard Class | : 4.1 | | |
| Label Codes | : 4.1 | | |
| Division | : 4.1 | | |
| ERG Code (IATA) | : 3L | | |
| 14.4. In Accordance with | TDG | | |
| Proper Shipping Name | : SULFUR | | |
| Packing Group | : 111 | | |
| Hazard Class | : 4.1 | | |
| Identification Number | : UN1350 | | |
| Label Codes | : 4.1 | | |

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SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

| Sulfur | | |
|--|---|--|
| SARA Section 311/312 Hazard Classes | Physical hazard - Flammable (gases, aerosols, liquids, or solids) | |
| | Physical hazard - Combustible dust | |
| | Health hazard - Skin corrosion or Irritation | |
| Sulfur (7704-34-9) | | |
| Listed on the United States TSCA (Toxic Substances Control | Act) inventory | |
| Hydrogen sulfide (7783-06-4) | | |
| Listed on the United States TSCA (Toxic Substances Control | Act) inventory | |
| Listed on the United States SARA Section 302 | | |
| Subject to reporting requirements of United States SARA Se | ection 313 | |
| CERCLA RQ 100 lb | | |
| SARA Section 302 Threshold Planning Quantity (TPQ) 500 lb | | |
| SARA Section 313 - Emission Reporting 1% | | |
| 15.2. US State Regulations | | |
| Sulfur (7704-34-9) | | |
| U.S Massachusetts - Right To Know List | | |
| U.S New Jersey - Right to Know Hazardous Substance List | | |
| U.S. Donneylyania DTK (Pight to Know) List | | |

U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen sulfide (7783-06-4)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

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15.3. Canadian Regulations

Sulfur (7704-34-9)

Listed on the Canadian DSL (Domestic Substances List)

Hydrogen sulfide (7783-06-4)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

| Date of Preparation or Latest | |
|-------------------------------|--|
| Revision | |
| Other Information | |

- : 10/23/2018
- : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

| Acute Tox. 2 (Inhalation:gas) | Acute toxicity (inhalation:gas) Category 2 |
|-------------------------------|--|
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Aquatic Acute 2 | Hazardous to the aquatic environment - Acute Hazard Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Comb. Dust | Combustible Dust |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Flam. Gas 1 | Flammable gases Category 1 |
| Flam. Sol. 2 | Flammable solids Category 2 |
| Press. Gas (Liq.) | Gases under pressure Liquefied gas |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H220 | Extremely flammable gas |
| H228 | Flammable solid |
| H280 | Contains gas under pressure; may explode if heated |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H330 | Fatal if inhaled |
| H335 | May cause respiratory irritation |
| H400 | Very toxic to aquatic life |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |
| Health Hazard : | 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. |
| Fire Hazard : | 1 - Materials that must be preheated before ignition can occur. |
| Reactivity Hazard : | 0 - Material that in themselves are normally stable, even under fire conditions. |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. NA GHS SDS 2015 (Can, US)