

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 08/08/2016 Date of Issue: 08/08/2016

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Carbon/Graphite Products1.2. Intended Use of the Product

Mechanical Component

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

Company

St. Mary's Carbon 259 Eberl St. St. Mary's PA, 15857 814-781-7333

www.stmaryscarbon.com

1.4. Emergency Telephone Number

Emergency Number : 814-781-7333 (Hours of Operation: 7:30 a.m.- 4:00 p.m. M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Not classified

2.2. Label Elements

GHS-US/CA Labeling

No labeling applicable

2.3. Other Hazards

This product is physiologically inert in its massive form. However, user-generated dust and/or fumes may pose a physiological hazard if inhaled or ingested. Avoid inhalation of dusts and fumes. May cause an influenza-like illness. Avoid skin and eye contact with dusts to prevent mechanical irritation. User-generated dust is easily ignited and difficult to extinguish. Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product Identifier | % * | GHS Ingredient Classification |
|---------------------------|---------------------|---------|---|
| Graphite | (CAS No) 7782-42-5 | 40 - 80 | Comb. Dust |
| Coke, petroleum, calcined | (CAS No) 64743-05-1 | 20 - 50 | Comb. Dust |
| | | | STOT RE 2, H373 |
| Molybdenum(IV) sulfide | (CAS No) 1317-33-5 | 2 - 10 | Acute Tox. 4 (Inhalation:dust,mist), H332 |
| Quartz | (CAS No) 14808-60-7 | < 0.3 | Carc. 1A, H350 |
| | | | STOT SE 3, H335 |
| | | | STOT RE 1, H372 |

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).

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^{*}Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

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Inhalation: For particulates, dust, or fumes from processing: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Dust from this product may cause skin irritation. Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention. Call a physician or poison control center immediately.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: The following applies to the product if it is cut, sanded or altered in such a way that excessive and/or significant particulates and/or dusts may be generated: May cause cancer. May cause damage to organs through prolonged or repeated exposure.

Inhalation: For particulates and dust: Prolonged exposure may cause irritation.

Skin Contact: For particulates and dust: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes. **Ingestion:** Ingestion may cause adverse effects.

Chronic Symptoms: For particulates and dust: May cause cancer. May cause damage to organs through prolonged or repeated exposure.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

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

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures. Dust, chips, or ribbons can be ignited more easily, by an ignition source, by improper machining, or by spontaneous combustion if finely divided and damp.

Explosion Hazard: Product itself is not explosive but if dust is generated, dust clouds suspended in air can be explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

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: Irritating fumes, smoke, oxides of carbon and hydrocarbons. Sulfur oxides.

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: Avoid generating dust. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not handle until all safety precautions have been read and understood.

6.1.1. For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: 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.

6.2. Environmental Precautions

Avoid release to the environment. Contact competent authorities after a spill. Collect spillage.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

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Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

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

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Dust particles generated from processing may cause an allergic reaction in sensitive individuals. Dust generated from processing may present a dust explosion hazard.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Avoid contact with skin, eyes and clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

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

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Mechanical Component

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.

| Graphite (7782-42-5) | | |
|-------------------------|-------------------------|--|
| USA ACGIH | ACGIH TWA (mg/m³) | 2 mg/m³ (all forms except graphite fibers-respirable fraction) |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 15 mg/m³ (synthetic-total dust) |
| | | 5 mg/m³ (synthetic-respirable fraction) |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 2.5 mg/m³ (natural-respirable dust) |
| USA IDLH | US IDLH (mg/m³) | 1250 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibres-respirable) |
| British Colombia | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibres-respirable) |
| Manitoba | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers-respirable |
| | | fraction) |
| New Brunswick | OEL TWA (mg/m³) | 2 mg/m³ (all forms except graphite fibres) |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers-respirable |
| | | fraction) |
| Nova Scotia | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers-respirable |
| | | fraction) |
| Nunavut | OEL TWA (mg/m³) | 5 mg/m³ (synthetic-respirable mass) |
| | | 10 mg/m³ (synthetic, total mass) |
| Northwest Territories | OEL STEL (mg/m³) | 4 mg/m³ (natural-respirable fraction) |
| Northwest Territories | OEL TWA (mg/m³) | 2 mg/m³ (natural-respirable fraction) |
| Ontario | OEL TWA (mg/m³) | 2 mg/m³ (except Graphite fibres-respirable) |
| Prince Edward Island | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers-respirable |
| | | fraction) |
| Québec | VEMP (mg/m³) | 2 mg/m³ (containing no Asbestos and <1% Crystalline silica, |
| | | except Graphite fibres-respirable dust) |
| Saskatchewan | OEL STEL (mg/m³) | 4 mg/m³ (natural, except Graphite fibres-respirable |
| | | fraction) |

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| Saskatchewan | OEL TWA (mg/m³) | 2 mg/m³ (natural, except Graphite fibres-respirable |
|----------------------------|-------------------------|---|
| | | fraction) |
| Yukon | OEL TWA (mg/m³) | 20 mppcf |
| | | 30 mppcf (synthetic) |
| | | 10 mg/m³ (synthetic) |
| Molybdenum(IV) sulfide (13 | 17-33-5) | |
| USA ACGIH | ACGIH TWA (mg/m³) | 10 mg/m³ (inhalable fraction); 3mg/m3 TWA (respirable |
| | | fraction)(listed under Molybdenum) |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 15 mg/m³ (total dust)(listed under Molybdenum insoluble |
| | | compounds) |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 5000 mg/m³ (Listed under Molybdenum) |
| Quartz (14808-60-7) | | |
| USA ACGIH | ACGIH TWA (mg/m³) | 0.025 mg/m³ (respirable fraction) |
| USA ACGIH | ACGIH chemical category | A2 - Suspected Human Carcinogen |
| USA OSHA | OSHA PEL (STEL) (mg/m³) | 250 mppcf/%SiO ₂ +5, 10mg/m ³ /%SiO ₂ +2 |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 0.05 mg/m³ (respirable dust) |
| USA IDLH | US IDLH (mg/m³) | 50 mg/m³ (respirable dust) |
| Alberta | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable particulate) |
| British Colombia | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable) |
| Manitoba | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable fraction) |
| New Brunswick | OEL TWA (mg/m³) | 0.1 mg/m³ (respirable fraction) |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable fraction) |
| Nova Scotia | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable fraction) |
| Nunavut | OEL TWA (mg/m³) | 0.1 mg/m³ (respirable mass) |
| | | 0.3 mg/m³ (total mass) |
| Northwest Territories | OEL TWA (mg/m³) | 0.05 mg/m³ (respirable fraction) |
| Ontario | OEL TWA (mg/m³) | 0.10 mg/m³ (designated substances regulation-respirable) |
| Prince Edward Island | OEL TWA (mg/m³) | 0.025 mg/m³ (respirable fraction) |
| Québec | VEMP (mg/m³) | 0.1 mg/m³ (respirable dust) |
| Saskatchewan | OEL TWA (mg/m³) | 0.05 mg/m³ (respirable fraction) |
| Yukon | OEL TWA (mg/m³) | 300 particle/mL |

8.2. Exposure Controls

Appropriate Engineering Controls: The following applies to the product if it is cut, sanded or altered in such a way that excessive and/or significant particulates and/or dusts may be generated: Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Materials for Protective Clothing: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.









Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves. **Eye Protection:** Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: 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.

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

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Physical State

Viscosity

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015). Solid

Appearance Black Odor None **Odor Threshold** Not available Not available pН Not available **Evaporation Rate Melting Point** Not available **Freezing Point** Not available **Boiling Point** Not available **Flash Point** Not available **Auto-ignition Temperature** Not available **Decomposition Temperature** Not available Flammability (solid, gas) Not available

Lower Flammable Limit Not available **Upper Flammable Limit** Not available Not available **Vapor Pressure** Relative Vapor Density at 20°C Not available **Relative Density** 1.2 - 2 (Water = 1) **Specific Gravity** Not available Not available Solubility Not available Partition Coefficient: N-Octanol/Water

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
- Stable under recommended handling and storage conditions (see section 7). 10.2. Chemical Stability:
- 10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.

Not available

- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. Hazardous Decomposition Products: No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on Toxicological Effects - Product**

Acute Toxicity (Oral): Not classified Acute Toxicity (Dermal): Not classified Acute Toxicity (Inhalation): Not classified LD50 and LC50 Data: Not available Skin Corrosion/Irritation: Not classified Eve Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

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: For particulates and dust: Prolonged exposure may cause irritation. Symptoms/Injuries After Skin Contact: For particulates and dust: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes. Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

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Chronic Symptoms: For particulates and dust: May cause cancer. May cause damage to organs through prolonged or repeated exposure.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| Molybdenum(IV) sulfide (1317-33-5) | | |
|---|---|--|
| LC50 Inhalation Rat | > 2820 mg/m³ (Exposure time: 4 h) | |
| LC50 Inhalation Rat | 2.82 mg/l/4h | |
| Quartz (14808-60-7) | | |
| LD50 Oral Rat | > 5000 mg/kg | |
| LD50 Dermal Rat | > 5000 mg/kg | |
| Quartz (14808-60-7) | | |
| IARC Group | 1 | |
| National Toxicology Program (NTP) Status | Known Human Carcinogens. | |
| OSHA Hazard Communication Carcinogen List | In OSHA Hazard Communication Carcinogen list. | |

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

12.2. Persistence and Degradability

| | • |
|-------------------------------|------------------|
| Carbon/Graphite Products | |
| Persistence and Degradability | Not established. |

12.3. Bioaccumulative Potential

| Carbon/Graphite Products | |
|----------------------------------|------------------|
| Bioaccumulative Potential | Not established. |

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 contents/container in accordance with local, regional, national, provincial, territorial, and international regulations

Ecology - Waste Materials: Avoid release to the environment.

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 Not regulated for transport
 14.2. In Accordance with IMDG Not regulated for transport
 14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

| Graphite (7782-42-5) | |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Coke, petroleum, calcined (64743-05-1) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Molybdenum(IV) sulfide (1317-33-5) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Quartz (14808-60-7) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

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15.2. US State Regulations

| Quartz (14808-60-7) | |
|--|--|
| U.S California - Proposition 65 - Carcinogens List | WARNING: This product contains chemicals known to the State of |
| | California to cause cancer. |

Graphite (7782-42-5)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

Molybdenum(IV) sulfide (1317-33-5)

U.S. - Massachusetts - Right To Know List

Quartz (14808-60-7)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

15.3. Canadian Regulations

Graphite (7782-42-5)

Listed on the Canadian DSL (Domestic Substances List)

Coke, petroleum, calcined (64743-05-1)

Listed on the Canadian DSL (Domestic Substances List)

Molybdenum(IV) sulfide (1317-33-5)

Listed on the Canadian DSL (Domestic Substances List)

Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

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

Revision Date

: 08/08/2016

Other Information

: 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).

GHS Full Text Phrases:

| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
|--|---|
| Carc. 1A | Carcinogenicity Category 1A |
| Comb. Dust | Combustible Dust |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT RE 2 | Specific target organ toxicity (repeated exposure) Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| Comb. Dust | May form combustible dust concentrations in air |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H350 | May cause cancer |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H373 | May cause damage to organs through prolonged or repeated exposure |

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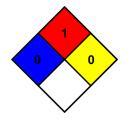
NFPA Health Hazard : 0 - Exposure under fire conditions would offer no hazard

beyond that of ordinary combustible materials.

NFPA Fire Hazard : 1 - Must be preheated before ignition can occur.

NFPA Reactivity Hazard : 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.



HMIS III Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

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 (US, Can)

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