| | | |
|---|---|---|
| **Asbury Graphite Mills, Inc.** | PO Box 144, 405 Old Main St. Asbury, NJ 08802 | 908-537-2155 |
| **Cummings – Moore Graphite Co.** | 1646 N. Green Ave. Detroit, MI 48209 | 313-841-1615 |
| **Anthracite Industries** | PO Box 112, Sunbury, PA 17801 | 570-286-2176 |
| **Southwestern Graphite** | PO Box 876, 2564 Hwy 12 DeQuincy, LA 70633 | 337-786-5905 |
| **Asbury Graphite of California** | 2855 Franklin Canyon Rd. Rodeo, CA 94572 | 510-799-3636 |
| **Asbury – Wilkinson** | 1115 Sutton Drive Burlington, ON, L7L 5Z8 Canada | 905-332-0862 |
| **Asbury Graphite & Carbons NL B.V.** | Fregatweg 46 B-C, Maastricht 6222 NZ Netherlands | +31437600610 |
| **Graphitos Mexicanos de Asbury, S.A. de C.V.** | Blvd José Maria Morelos No.389 Nte, Hermosillo 83148 Mexico | 526622678598 |

# Safety Data Sheet

## Section 1 – Identification of the Substance / Preparation, and of the Company

1.1: Product Identifier

| | | |
|---|---|---|
| Trade Name: | TF50 Grounding Mixture | Grade: TF50 |
| REACH Registration Number: | Exempt | |
| Substance Name: | Metallurgical coke CAS#65996-77-2<br>Bentonite CAS# 1302-78-9 | |

1.2: Indentified uses of the substance or mixtures

1.2.1 Uses: Inorganic source of carbon, filler, thermal additive, re-carburizer, casting powders, drilling fluids, grounding compound, chemically resistant additive, general inert filler-additive.

1.2.2 Uses Advised Against: For industrial use only, not for food, drug, or cosmetic applications.

1.3: Supplier Information

| | | |
|---|---|---|
| Company/Manufacturer: | Asbury Carbons, Inc.<br>PO Box 144, 405 Old Main Street<br>Asbury, NJ 08802 | Telephone: 908-537-2155<br>Telefax: 908-723-2908<br>Preparer: AVT<br>Email Address: albert@asbury.com<br>Date Prepared: 12/3/2015 |

1.4: Emergency Telephone Number 1-800-255-3924

## Section 2: Hazards Identification

2.1: Classification of substance

2.1.1 Under certain conditions this mixture may be considered hazardous according to OSHA 29 CFR 1910.1200.

2.1.2 This mixture is not classified as hazardous substances per European hazardous classification.

2.2: Label Elements

Hazard Statement: H373 may cause damage to lung through prolonged or repeated inhalation.
Precautionary Statement: P260: do not breath dust
P285: In case of inadequate ventilation wear respiratory protection.

2.3: Other hazards

None known

**Section 3 – Composition/Information on Ingredients:**

Chemical Composition:

Carbon variety Metallurgical Coke 88-99%. ]
Metallurgical coke is not a pure substance, but is a mixture of carbon, inert mineral matter, and silica.
CAS # 65996-77-2
EC # 266-010-4
Molecular Weight: 12.0

Silica, Crystalline Silica, variety Quartz 1.0-2.0% (may or may not be in respirable form)
This substance is a naturally occurring impurity and is not intentionally added.
CAS # 14808-60-7
EC # 238-878-4
Molecular Weight: 60.0

Bentonite clay, 0-10%
CAS# 1302-78-9
Molecular Weight: High MW clay

**Section 4 – First Aid Measures**

| | |
|---|---|
| **4.1.1 Inhalation** | Remove patient to particulate-free environment. Wear approved dust mask to avoid breathing dust. Seek medical attention if irritation persists. |
| **4.1.2 Skin contact** | Wash with mild soap and warm water: TF50 is non-staining to skin and is not a chemical irritant. |
| **4.1.3 Eye contact** | Rinse with tepid water until eyes are clear of particulates. Seek medical attention if irritation persists. |
| **4.1.4 Ingestion** | Get immediate medical attention. Do not induce vomiting unless directed by medical personnel. TF50 is not known to be toxic by ingestion. However, ingestion may cause digestive system blockage. |
| 4.2 Most important symptoms and effects, both acute and delayed: No Data Available | |
| 4.3 Indication of any immediate medical attention and special treatment needed: If patient exhibits shortness of breath, choking, powder inundated eyes or mouth; immediate medical attention may be required. | |

**Section 5 – Fire Fighting Measures**

| | |
|---|---|
| Mixture TF50 is not flammable under normal conditions | |
| 5.1 Extinguishing Media | Dry chemical extinguisher, water, sand, limestone powder, |
| 5.2 Special Hazards | This substance will burn but is not easily ignited. At temperatures above 1500 C, coke reacts with substances containing oxygen, including water and carbon dioxide. In case of intensely hot fire events, use sand to cover and isolate the burning coke. |
| Products of Combustion: | Carbon dioxide, $CO_2$, carbon monoxide, CO, sulfur dioxide, $SO_2$. |
| 5.3 Advice for Fire Fighters: Use self contained air pack, gloves, safety goggles | |
| 5.4 Additional Information: USA NFP Rating 010 | |

**Section 6 – Accidental Release Measures**

| | |
|---|---|
| | Wear approved dust mask, safety goggles, and conventional work gloves. |
| Methods for Cleaning Up: | Conventional Sweep or vacuum. Avoid creating dusting conditions |
| 6.1 Personal precautions , protective equipment and emergency procedures | |
| 6.1.1 For non-emergency personnel: Wear approved dust mask, safety goggles, and conventional work gloves. Use conventional cleanup techniques and avoid creating dust. Vacuum is preferred over sweeping. Wear a dust mask/respirator to reduce the change of inhaled dust. TF50 is electrically conductive and any cleanup methods should avoid contacting TF50 with electrical circuitry. | |
| 6.1.2 For emergency responders: Wear approved dust mask, safety goggles, and conventional work gloves. Same methodology as for non-emergency personnel(sec 6.1.1) | |
| 6.2 Environmental Precautions: Mixture TF50 is inert and insoluble and will not pose any soluble ion hazards to the environment. However, good housekeeping practices should be followed and spilled material should be cleaned up, and disposed of in an appropriate manner. | |
| 6.3 Methods and material for containment and clean up: No special containment needed other than conventional vacuuming and waste containment. Avoid creating dust. Mixture TF50 is electrically conductive and any cleanup methods should avoid contacting TF50 with electrical circuitry. | |
| 6.4 Reference to other sections: Not needed<br>6.5 Additional information: Not needed | |

**Section 7 – Handling and Storage**

**7.1 Precautions for safe handling**

| |
|---|
| 7.1.1 Handling Use conventional methods, but avoid dusting conditions. Keep powder from contacting eyes. Mixture TF50 is a conductor of electricity. Avoid contact between TF50 and electrical circuitry. |
| 7.2 Conditions for safe storage, including any incompatibilities. |
| Storage and Incompatibilities Store all carbonaceous materials in a dry location. TF50 is incompatible with all oxidizing agents |
| Dust Explosibility Hazards: Very finely divided coke powder poses a slight risk of dust explosion hazard: Dust class ST1, MIE greater that 10 J (very low hazard of spark ignition) |

**Section 8 – Exposure Controls/ Personal Protection**

**8.1 Control parameters**

8.1.1 Occupational exposure limits

| Component | CAS No. | % | ACGIH TWA | Control Reference |
|---|---|---|---|---|
| Metallurgical coke | 65996-77-2 | 88-99 | 3.0 mg/m$^3$ Respirable particles 10.0 mg/m$^3$ Inhalable dust | 2014 ACGIH TLV Handbook: Low toxicity/insoluble or poorly soluble-Not otherwise specified |
| Bentonite clay | 1302-78-9 | 0-10 | 3.0 mg/m$^3$ Respirable particles 10.0 mg/m$^3$ Inhalable dust | 2014 ACGIH TLV Handbook: Low toxicity/insoluble or poorly soluble-Not otherwise specified |
| Crystalline silica(naturally occurring impurity) | 14808-60-7 | 1-2 | 0.025 mg/m$^3$ Respirable dust | 2014 ACGIH TLV Handbook: Low toxicity/insoluble or poorly soluble-Not otherwise specified |

| | |
|---|---|
| Engineering Measures | Use adequate dust collection to maintain dust levels below the control or recommended values. |
| Respiratory Protection | Approved dust mask, type N95 recommended. |
| Eye Protection | Conventional safety glasses or goggles. |
| Skin Protection | Conventional work gloves and clothing. |
| Additional | Metallurgical coke is not a pure substance, but is a mixture of carbon, inert mineral matter, and silica. |

8.2 Exposure controls

| |
|---|
| 8.2.1 Appropriate engineering controls: Use adequate dust collection to maintain dust levels below the control or recommended values. |
| 8.2.2 Personal protective equipment<br>8.2.2.1 Eye/Face Protection: Wear laboratory goggles, or full side shielded safety glasses.<br>8.2.2.2 Skin Protection: Conventional work gloves and clothing.<br>8.2.2.3 Respiratory Protection: Approved dust mask, type N95 recommended. |
| 8.2.3 Environmental exposure controls: Mixture TF50 is inert and insoluble. To the best of our knowledge, TF50 will not present any environmental hazards. No special environmental exposure controls, other than standard practices for dust and spill control, are required. |

**Section 9 – Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| Color: | Gray to Black | Material State | Solid, granular or powder |
| Odor | None | | |
| Boiling Point: | NA | Melting Point | Above 1000 C |
| Specific Gravity | 1.8-2.0 | Vapor Density | Not applicable |
| Vapor Pressure (mm Hg) | NA | % Volatile (By Wt.) | 0-4% |
| Solubility in Water | Insoluble | Evaporation Rate: | Not applicable |
| pH | NA | Auto Ignition | Above 500 ˚C |
| Decomposition Temp | Oxidizes above 450C | Dust Explosion class | ST1=KST>0-200 bar m/s, MIE above 10 J. |
| Flash Point | NA | | |

**Section 10 – Stability and Reactivity**

| | |
|---|---|
| 10.1 Reactivity | Mixture TF50 is non-reactive under ambient conditions. |
| 10.2 .Stability | Stable. Will not polymerize or self react spontaneously. |
| 10.3 Possibility of hazardous reactions | None known |
| 10.4 Conditions to Avoid | Avoid contact with oxidizing agents. Metallurgical coke will begin to oxidize at temperatures above 450 C. |
| 10.5 Incompatible materials | Oxidizing agents |
| 10.6 Hazardous products of decomposition | Carbon Dioxide ($CO_2$), Carbon Monoxide (CO), Sulfur dioxide ($SO_2$) |
| Flammable Limits (% by Vol.) | LEL and UEL values not available: Minimum Ignition Energy (MIE) greater than 10 joules. When exposed to extremely high energy ignition sources very finely divided coke powder can form explosive mixtures with air. Avoid contact between coke dust clouds and high energy ignition sources. Classified as combustible but not flammable. |

**Section 11 – Toxicological Information**
**11.1 Information on toxicological effects**

Toxicological information about mixture TF50 is not available. TF50 is inert, insoluble and is not expected to present ingestion or other acute toxicity hazard.

STOT-repeated exposure: This product contains quartz (respirable) as an impurity, and as a result is classified as STOT RE2 according to EC 1272/2008.

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. *(IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)*

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. “There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk…“ *(SCOEL SUM Doc 94-final, June 2003).*

**Aspiration hazard:** Solid substance. Based on available data the classification criteria are not met.

**Symptoms related to the physical, chemical and toxicological characteristics:**
In case of ingestion: Mixture TF50 is inert and insoluble, no ingestion toxicity is expected. However, irritation of the gastrointestinal tract, as well as blockage of the gastrointestinal tract may occur.
In case of skin contact: Mechanical irritation is possible.
In case of inhalation: Inhalation may result mechanical irritation of the respiratory tract. No symptoms are expected if relevant occupational exposure levels are adhered to. In situations of repeated excessive lung overload due to a high airborne concentration of particles of respirable size for extended periods of time pneumoconiosis may develop. See section 4 for first aid measures.
In case of eye contact: Mechanical irritation possible. No human data on effects after eye contact are available. See section 4 for first aid measures.

**Section 12 – Ecological Information**

| | |
|---|---|
| 12.1 Toxicity: | Mixture TF50 is inert and insoluble. To the best of our knowledge, TF50 does not present any significant environmental hazards unless present in very high concentrations. Carbon is the principal constituent of TF50, and is not expected to pose a toxic hazard to aquatic organisms. |
| 12.1.1 Aquatic Toxicity: Data not available. Mixture TF50 is not water soluble and does not present a soluble-ion hazard. Fine metallurgical coke and/or bentonite clay particles suspended in natural water bodies may be harmful to organisms sensitive to suspended solids. | |
| 12.1.2 Sediment toxicity: None known. | |
| 12.1.3 Terrestrial toxicity: None known. | |
| | |
| 12.2 Persistence and degradability: TF50 will not degrade further under normal conditions. TF50 is stable, unreactive in water under ambient conditions, and is insoluble. | |
| 12.3 Bioaccumulation potential: There is no evidence indicating that TF50 is bioaccumulative. | |
| | |
| 12.4 Soil Mobility: TF50 is not expected to have mobility in soil as it is an insoluble, inorganic substance. | |
| 12.5 PBT and vPvB assessment: TF50 is not a persistent bioaccumulative and toxic substance. | |
| 12.6 Other adverse effects: None known. TF50 has no ozone depleting potential. | |

**Section 13 – Disposal Considerations**

Dispose of in a manner which conforms to local, state and Federal regulations.

TF50 is non-hazardous but disposal of waste should be handled in a responsible matter.

TF50 is not biodegradable.

Packaging should be completely emptied of contents and disposed of in a manner specified by the recycler/regional disposal contractor. Dust formation from packaging residues should be avoided. Store empty packaging in a suitable receptacle

**Section 14 – Transport Information**

| | |
|---|---|
| 14.1 UN Number | Not applicable |
| 14.2 UN Proper shipping name | Not applicable |
| 14.3 Transport hazard class | Not applicable |
| 14. 4 Packing Group | Not applicable |
| 14.5 Environmental hazards | None known |
| Marine Transport | Not classified as a hazardous material |
| Land Transport | Not classified as a hazardous material |
| Air Transport | Not classified as a hazardous material |
| Transport Label Required | No label required |

**Section 15 – Regulatory Information**

**15.1 Regulatory Status and Inventories**

| | | |
|---|---|---|
| Not Classified | | |
| Inventory Information: | Metallurgical Coke | Bentonite |
| EEC EINECS | #266-010-4 | 215-108-5 |
| US TSCA | Yes | Yes |
| Canada DSL | Yes | Yes |
| Canada NDSL | No | No |
| Australian AICS | Yes | Yes |
| Korean ECL | Yes | Yes |
| IECSC | Yes | Not Known |
| SARA 302/304/313 | Not listed | Not listed |
| REACH: Mixture TF50 is exempt from REACH registration per Annex V, Paragraph X. | | |
| | | |

**Section 16 – Other Information**

**Abbreviations Used:**

ACGIH TWA American Council of Government and Industrial Hygienists Time Weighted Average value.
CAS Chemical Abstracts Service
NA Not applicable
N.O.S. Not otherwise specified
BW Body weight