



## Safety Data Sheet

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ultrafoam™ Reticulated Vitreous Carbon Foam

Supplier: Ultramet

12173 Montague St, Pacoima California 91331

Telephone: +1 818-899-0236 Fax: +1- 818-890-1946

www.ultramet.com

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

OSHA Hazards Irritant

#### GHS Classification

This substance is not classified according to the Global Harmonized System



Signal word Warning

Hazard statement(s)

None

#### HMIS Classification

Health hazard: 0

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health Hazard: 0

Fire: 0

Reactivity: 0

#### Potential Health Effects

**Inhalation** May be harmful if inhaled. Small graphite fibers, powders or dust are suspected as being possible inhalation hazards. Causes respiratory tract irritation.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

**Chronic Exposure:** A review of the literature does not show obvious long term hazard.

Contains no ingredients now known to be hazardous by OSHA. The normal cutting of the fiber, rod or carbon mount, either with scissors, razor blade or other machining is suspected of generating small amounts of possibly respirable fibers or dust. We believe that such cutting or working with powder should be done in a ventilated hood facility.

Signs and Symptoms of Overexposure: Coughing, forceful expiration. Dyspnea, difficulty in breathing. Black sputum, black colored expectorate. Bronchitis, inflamed bronchial mucous membranes, pulmonary fibrosis, fibrous tissue involving lungs. Pneumoconiosis, degenerative respiratory disease.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula: C

Molecular Weight: 12.01 g/mol

Component	CAS no.	Concentration
Carbon	7440-44-0	100%

### **4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance Move out of dangerous area.

**If inhaled**

If large amounts of the dust are inhaled, move the exposed person to fresh air at once. If symptoms persist contact physician.

**In case of skin contact**

Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes.. Generally not a skin irritant. Consult a physician if needed.

**In case of eye contact**

In case of contact, immediately flush eyes with copious amounts of flowing water for at least 15 minutes, retracting eye lids often. Get medical attention immediately. Contact lenses should not be worn when working with this product.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **5. FIREFIGHTING MEASURES**

**Suitable extinguishing media**

Carbon dioxide, extinguishing powder or water spray. For large fires use water spray or alcohol-resistant foam.

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions include carbon dioxide and carbon monoxide.

**Further information**

Use water spray to cool unopened containers.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains or into the environment without proper governmental permits.

**Methods and materials for containment and cleaning up**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

Keep away from incompatible materials.

**Conditions for safe storage**

Store in a cool, dry place. Keep container tightly sealed in a well-ventilated area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Components	CAS-No.	Value	Control parameters	Basis
Graphite	7782-42-5	TWA	15 Million particles per cubic foot	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
Remarks	Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques. mppcf X 35.3 = million particles per cubic meter = particles per c.c			
		TWA	2.5 mg/m3	USA. NIOSH Recommended Exposure Limits
Also see specific listing for Graphite (synthetic).				
		TWA	10 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	15 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Pneumoconiosis				
		TWA	2.5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

**Personal protective equipment**

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Safety glasses with side-shields conforming to EN166 or ANSI 87.1. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

Form: Solid  
Color: Dark gray

**Safety data**

pH no data available

Melting point/range: 3650 °C

Boiling point: 4826.6 °C

Flash point: no data available

Flammability (solid, gas): no data available

Ignition temperature: no data available

Auto-ignition temperature: 450 °C (842 °F)

Resistivity: 1375  $\mu\Omega$ -cm<sub>20°C</sub> (graphite)

Lower explosion limit: no data available

Upper explosion limit: no data available

Vapor pressure: <0.1 mmHg ( 20 °C)

Density: 1.4-1.5 g/cm<sup>3</sup>

Water solubility: insoluble

Partition coefficient: n-octanol/water: no data available

Relative vapor density: no data available

Odor: odorless

Odor Threshold: no data available

Evaporation rate: no data available

## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

No data available.

**Conditions to avoid:** Heat, flames and sparks avoid heating above 290° C. Extremes of temperature and direct sunlight.

### **Materials to avoid**

Strong oxidizing agents, Strong acids

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide

Other decomposition products: no data available

## **11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

#### **Oral LD50**

- > 5 gm/kg (dog)
- > 5 gm/kg (mouse)
- > 5 gm/kg (rat)

**Inhalation LC50:** no data available

**Dermal LD50:** no data available

#### **Other information on acute toxicity:**

Human experience: Graphite causes benign pneumoconiosis (graphitosis). Symptoms of pneumoconiosis from graphite exposure are Dyspnea, coughing, black sputum, bronchitis, ventricular hypertrophy and impairment of pulmonary function. X-rays will show progressive nodulation of the lungs. The threshold limit value was set in conformity with the limit for free crystalline silica, which may be present in graphite.

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

#### **Carcinogenicity**

IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** post-implantation mortality has occurred in laboratory animals.

**Teratogenicity:** no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System):** no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System):** no data available

**Aspiration hazard:** no data available

#### **Potential health effects**

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation and conjunctivitis and corneal damage.

**Signs and Symptoms of Exposure** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic affects** no data available

**Chronic Effects:** A review of the literature does not show obvious long term hazard.

## **12. ECOLOGICAL INFORMATION**

**Toxicity:** no data available

**Persistence and degradability:** no data available

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** no data available

**Other adverse affects:** no data available

## **13. DISPOSAL CONSIDERATIONS**

### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Consult federal, state and local governmental regulations for proper disposal.

**RCRA 40 CFR 261 Classification:** This product as purchased does not fall under current US EPA (Environmental Protection Agency) RCRA definitions of hazardous waste.

**Contaminated packaging:** Dispose of as unused product.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

## **14. TRANSPORT INFORMATION**

### **DOT (US)**

Not dangerous goods

### **IMDG**

Not dangerous goods

### **IATA**

Not dangerous goods

## **15. REGULATORY INFORMATION**

**OSHA Hazards:** Irritant

**SARA 302 Components** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.

### **Massachusetts Right To Know**

Graphite Cas # 7782-42-5

### **Pennsylvania Right To Know Components**

Graphite Cas # 7782-42-5

### **New Jersey Right To Know Components**

Graphite Cas # 7782-42-5

### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA:** All components of this product are listed on the Toxic Substance Control Act (TSCA) Section 8(b) Chemical Inventory.

**CERCLA:** This product does not contain any CERCLA regulated materials.

## **16. OTHER INFORMATION**

### **Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.