

## SAFETY DATA SHEET

### Section 1: Product and Company Identification

Product Name: Graphene film on SiC grown via sublimation

Product ID: GSC8

Manufacturer/Supplier:  
BihurCrystal S.L  
Pº Mikeletegi 83, 3º local 7  
20009 Donostia, Spain  
+34 943041816

Recommended use: Scientific research & development

### Section 2: Hazard(s) Identification

Generally not hazardous in normal handling, however good laboratory practices should always be used.

### Section 3: Composition/Information on Ingredients

Chemical Name: Carbon	Chemical Name: Silicon carbide
Molecular Formula: C	Molecular Formula: SiC
Content: <1%	Content: >99%
CAS Number: 7440-44-0	CAS Number: 409-21-2
EINECS: 215-135-2	EINECS: 206-991-8

#### **Section 4: First-Aid Measures**

General Treatment: No special measures required.

Special Treatment: None

Important Symptoms: None

Inhalation: Seek medical treatment in case of complaints.

Ingestion: Rinse mouth with water.

Skin: None. Product is not a skin irritant.

Eyes: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

Clothing: Contaminated clothing should be removed and washed thoroughly before re-use.

#### **Section 5: Fire-Fighting Measures**

Flammability: Non-flammable

Extinguishing Media: Use fire fighting measures that suit the environment.

Spec. Fire Fighting Procedure: As with any fire, wear self-contained breathing apparatus and protective clothing to prevent contact with skin, eyes or lungs.

#### **Section 6: Accidental Release Measures**

If Material Is Released/Spilled: Spilled or released material should be collected mechanically and disposed of in suitable containers. Use care during cleanup to prevent the creation of concentrations of dust.

Environmental Precautions: Do not allow material to be released to the environment without proper governmental permits.

## **Section 7: Handling and Storage**

Handling Conditions: No special requirements.

Storage Conditions: Store in a cool dry place in a tightly sealed container.

Work/Hygienic Maintenance: usual precautionary measures should be adhered to in handling chemicals.

Ventilation: N/A

## **Section 8: Exposure Controls/Personal Protection**

Permissible Exposure Limits: N/A

Threshold Limit Value: N/A

Special Equipment: None

Respiratory Protection: Not required.

Protective Gloves: Not required.

Eye Protection: Safety glasses or goggles

Body Protection: Protective work clothing.

## **Section 9: Physical and Chemical Properties**

Color: Colorless

Form: One atom thick film on SiC 500  $\mu\text{m}$  thick.

Odor: Odorless

Water solubility: Insoluble

Boiling Point: N/A

Melting Point: SiC 2730  $^{\circ}\text{C}$  ; Graphene approx. 3600 $^{\circ}\text{C}$ .

Flash Point: N/A

Autoignition Temperature: N/A

Density (bulk, at 20 °C): SiC 3.21 g/cm<sup>3</sup>; Graphene 2.09–2.23 g/cm<sup>3</sup>

Molecular weight: SiC 40,1 g/mol; Graphene 12,01 g/mol

### **Section 10: Stability and Reactivity**

Stability: Stable under recommended storage conditions

Reacts With: Avoid contact with strong oxidizing agents, fluorine, or chlorine trifluoride

Incompatible Conditions: None known.

Hazardous Decomposition Products: None known.

### **Section 11: Toxicological Information**

Potential Health Effects:

Eyes: Not tested

Skin: Not tested

Ingestion: Not tested

Inhalation: Not tested

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

### **Section 12: Ecological Information**

Aquatic Toxicity: N/A

Toxicity: N/A

Very Persistent, Very Bioaccumulative: No

Notes: Graphene is not biodegradable. To the best of our knowledge, there is no reliable data regarding its bioaccumulation or mobility in environmental media, nor is there reliable data to suggest that it should be considered an environmental hazard. SiC: Generally not hazardous for water. Do not allow material be released to the environment without proper governmental permits.

### **Section 13: Disposal Considerations**

Dispose of in accordance with local, state, national, and international regulations

### **Section 14: Transportation Data**

Hazardous: This material is not defined under US DOT, IMDG, GGVSee, or ICAO/IATA regulations as a hazardous substance

Hazard Class: N/A

Packing Group: N/A

UN Number: N/A

Proper Shipping Name: N/A

### **Section 15: Regulatory Information**

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: No

Sec 313 Toxic Chemicals: No

## **Section 16: Other 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. BihurCrystal shall not be held liable for any damage resulting from handling or from contact with the above product.