



SAFETY DATA SHEET

Section 1: Identification

Product Identifier: SHELLCOAT-B2, SHELLCOAT-B5

Other means of identification: Water-based suspensions of fine graphite.

Recommended use: Non-stick release agents in continuous casting of non-ferrous metals.

Manufacturer

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Section 2: Hazards Identification

Hazard Classification(s): Not classifiable according to 2012 US Hazard Communication Standard (29CFR 1910.1200).

Signal Word: Not classifiable according to OSHA HCS 2012 (29CFR1910.1200).

Precautionary Statement(s): May cause eye irritation.

CAUTION: Use of these products in continuous sheet casting environment usually involves spraying of product. Appropriate care should be taken to avoid allowing solids of any kind get into eyes and to avoid breathing airborne mist or particulate of any kind. Dried product can be very slippery.

Inhalation: Mist from and dried product may cause irritation or soreness of throat and nose.

Eye Contact: Mist/solids may cause temporary irritation or inflammation.

Skin Contact: May cause temporary dryness, irritation or rash.

Ingestion: Ingestion is unlikely. May cause gastrointestinal disturbances. Never induce vomiting without the advice of a physician.

Medical Conditions Aggravated by Exposure: Respiratory effects may be aggravated by smoking. Pre-existing respiratory problems may be aggravated by mist/dust.

Section 3: Composition / Information on Ingredients

Chemical and common names, CAS numbers and concentration

Chemical Name	Common Name	CAS Number	% by Weight
Graphite	Graphite	7782-42-5	22

Section 4: First Aid Measures

Inhalation: If respiratory tract irritation develops, move the person to a mist/dust free location. Rinse mouth to clear throat and expel liquid. Blow nose to evacuate mist/dust. Consult a physician if irritation persists.

Eye Contact: Products can be physical irritants to eyes. Do not rub eyes. Keep hands or contaminated body parts away from eyes. Remove contact lenses. Flush with water. If irritation persists, consult a physician.

Skin Contact: Wash with soap and water. For dryness, a skin cream may be helpful. Do not apply anything to a rash. Consult a physician if irritation persists.

Ingestion: Drink plenty of water. Do not induce vomiting without advice of a physician. Graphite is not known to be toxic by ingestion. Seek medical attention.

Notes to Physicians: Skin and respiratory effects are the result of temporary, mild mechanical irritation; exposure does not result in allergic manifestations. The material is inert in the body. Some individuals may experience allergic sensitivity reactions. These are generally limited to mild occupational dermatitis. Chronic inhalation may result in pleural plaques not associated with cancers. Other effects principally derived from physical abrasion.

Section 5: Fire Fighting Measures

Materials are not combustible under normal conditions. Use extinguishing media suitable for type of surrounding fire. At temperatures above 1500°C, graphite reacts with substances containing oxygen, including water and carbon dioxide. In case of intensely hot fire events, use sand to cover and isolate graphite.

Section 6: Accidental Release Measures

Spill Procedures: Wet cleanup should be with sponge or mop. Clean up procedures should minimize formation of airborne dusts. Remove dust by vacuuming using HEPA filtration where possible or use wet sweeping or a dust suppressant where sweeping is necessary.

Release into Air: Prevent release of airborne particulates where possible. Not a regulated hazardous substance. See Section 8 for appropriate engineering controls.

Release into Water: Release into water is not appropriate. Not a regulated hazardous substance.

Section 7: Handling and Storage

Storage: This product should not be allowed to freeze as solids will agglomerate and will irreversibly fall from suspension. These materials are stable but for best results should be consumed not more than six months from manufacture date.

Normal Use: Materials are stable under normal use and are not expected to produce significant hazardous by-products or emissions.

After Service: This product is consumed during use. Fine residue will exist on cast sheet. No particular after service precautions should be taken other than to dispose of empty containers in an appropriate manner.

Section 8: Exposure Controls / Personal Protection

Exposure Limits

Graphite	
ACGIH PEL as 8 hr TWA	2mg/m ³

Appropriate Engineering Controls: Use dust suppression controls. Local exhaust ventilation, point of generation dust collection, and/or down-draft work stations to minimize airborne dust generation are recommended when machining product.

Recommendations for Personal Protective Measures

Respiratory Protection:	Use appropriate protection pursuant to OSHA 29CFR 1910.134, 29CFR 1926.103, and CFR1910.1000, Subpart Z, Air Contaminants. The following information is provided as a guide and reflects industry recommendations for control of dust.
PPE < 1.0 f/cc	No specific recommendation, use personal protective equipment based on local conditions.
PPE 1.0 f/cc to 5.0 f/cc	Half-face, air purifying respirator equipped with a high efficiency particulate air (HEPA) filter cartridge.
PPE 5.0 to 25 f/cc	Full-face, air purifying respirator equipped with a high-

	efficiency particulate air (HEPA) filter cartridge
PPE > 25 f/cc	Full-face, positive pressure, supplied air respirator.
Skin Protection	Wear gloves, head coverings, and full body clothing to prevent skin irritation. Disposable clothing may be used. Store work clothes and street clothes separately.
PPE Other	Work clothes should be washed separately and the washing machine rinsed following use. If possible, do not take work clothes home following machining or removal activities that produce significant amounts of dust.
Eye Protection	Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses without goggles. Do not get dust or liquids into eyes. Have eye washing facilities available when using products.

These products are generally not hazardous during normal use. These guidelines are provided for special circumstances involved in machining, use and or after service removals. See Section 7 for after service and Section 13 for disposal recommendations.

Section 9: Physical and Chemical Properties

Physical and Chemical Properties

Appearance		Odor	pH	Water solubility	Specific gravity
Physical State	Color				
Liquid	Black	Mild	9 - 10	Dispersible	1.1

Note: This product should not be allowed to freeze (0°C) as solids will agglomerate and will irreversibly fall from suspension. Viscosity, pH, initial boiling point and boiling range, flash point, evaporation rate, flammability, upper/lower flammability or explosive limits, vapor pressure, vapor density, partition coefficient: n-octanol/water, auto-ignition temperature and decomposition temperature are irrelevant and/or unavailable to/for these materials.

Section 10: Stability and Reactivity

Chemical Stability: Materials are stable and will not polymerize or self-react spontaneously. Graphite will begin to oxidize at temperatures above 450°C.

Chemical Incompatibilities: Powerful oxidizers.

Hazardous Decomposition Products: None expected under conditions of normal use

Section 11: Toxicological Information

Exposure Routes and Effects

Inhalation: Dust may cause irritation or soreness of throat and nose.

Eye Contact: Dust may cause temporary irritation or inflammation.

Skin Contact: May cause temporary dryness, irritation or rash.

Ingestion: Ingestion is unlikely. May cause gastrointestinal disturbances. Never induce vomiting without the advice of a physician.

Medical Conditions Aggravated by Exposure: Respiratory effects may be aggravated by smoking. Pre-existing respiratory problems may be aggravated by dust.

Toxicology

Graphite	
Carcinogenicity by IARC	Group 3: Not classifiable as to its carcinogenicity to humans

Description of Symptoms: See Exposure Routes and Effects, Hazard Statement(s) and Precautionary Statement(s) sections above.

Additional Toxicology Information: N/A

Section 12: Ecological Information

Eco toxicological Information: These products are inert materials that remain stable overtime. No adverse effects of this material on the environment are anticipated. No information regarding any negative effects of this persistence has been noted.

Section 13: Disposal Consideration

Disposal: To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.

Hazardous Waste Classification: Materials as manufactured are not classified as a hazardous waste according to Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste. Disposal regulations vary. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

Empty Containers: Empty containers may contain product dust or residue. Do not re-use. Disposal regulations vary. Consult with all applicable regulations prior to disposal. Refer to Section 8 for instructions regarding Exposure Controls/Personal Protection.

Section 14: Transportation Information

Materials are not regulated hazardous substances, no specific regulations apply.

Section 15: Regulatory Information

SARA Title III Constituent: listed none

OSHA: Complies with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: All substances contained in this product are listed, if required, in the TSCA Chemical Inventory.

States: None known.

Canadian EPA: All substances in this product are listed, as required, on the Domestic Substance List (DSL).

RoHS: Product is compliant with EU RoHS directive.

Section 16: Other

Disclaimer:

The information contained herein is based on data considered to be accurate as of the preparation or revision date. It is provided in good faith and in compliance with state and federal regulations. No warranty or representation, express or implied is made as to the accuracy or completeness of this information. Other national, state and/or local regulations may apply.