



Material Safety Data Sheet

02-09-2012

I. Product and Company Identification

Trade Name: Celazole PBI U-60 with Carbon Fiber

Part Number: N/A

Chemical Family: Polybenzimidazole

Molecular Weight: Polymer

Company: Polymics Ltd.
2215 High Tech Road, State College, PA 16803
Tel: 814-357-5860
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Emergency Telephone: Polymics, Ltd. 814-357-5860

II. Composition & Information on Ingredients

Substance	CAS #	wt %	Exposure Limit
Polybenzimidazole	25928-81-8	60-95%	None established
Carbon Fiber	---	5-40%	OSHA PEL 8hr TWA 15 mg/m ³ and ACGIH TLV (8-hr TWA) 5 mg/m ³ for non respirable fiber and particulate. OSHA PEL 8hr TWA 5 mg/m ³ for respirable particulate.

III. Hazards Identification

EMERGENCY OVERVIEW:

- Spilled material may create slipping hazard.
- Molten plastic can cause severe thermal burns.
- Fumes produced during thermal processing may cause eye, skin, and respiratory tract irritation. Severe over-exposure may result in nausea, headache, chills, and fever.
- Secondary operations, such as grinding, sanding, or sawing can produce dust which can result in mechanical irritation to eyes and lungs.



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Hazard Rating:

Health	0
Flammability	0
Reactivity	0

Potential Physical Hazards

Electrical:	Dust, powders and particles may be electrically conductive. Care should be taken to prevent penetration of dusts, powders, and particles into electrical enclosures and electrical equipment.
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Potential Personal Hazards

Skin:	Powder not likely to cause skin irritation. Hot product can cause skin burns.
Eyes:	Product may cause irritation or injury due to mechanical action.
Inhalation:	May cause irritation. Severe over-exposure to fumes may result in nausea, headache, chills and fever. There are no known toxic effects.
Ingestion:	Not toxic in normal use.

IV. First Aid Measures

Skin:	Remove accumulated carbon fibers by rinsing with ample cool water and washing with mild soap. In case of molten product to skin contact, cool skin rapidly with cold water. Do not peel off. Seek medical attention immediately.
Eyes:	If material gets in eyes, flush with water for at least 15 minutes. Have eyes examined and treated by medical physician.
Inhalation:	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If symptoms persist, call a physician.
Ingestion:	No hazard in normal use. If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.



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V. Fire-Fighting Measures

Fire Hazard:	This product will not burn or melt. Decomposition occurs at temperature above 750 °C
Suitable Extinguishing Media:	PBI does not burn; use extinguishing media appropriate for surrounding materials and decomposition products
Special Protective Equipment for Firefighters:	Firefighters should protect themselves from decomposition products that may include carbon monoxide, carbon dioxide and nitrogen oxides.

VI. Accidental Release Measures

General:	Sweep or gather up material and place in proper container for disposal or recovery. Do not create a powder cloud by using a brush or compressed air.
Waste Disposal:	Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.
Container Disposal:	Unused material and empty containers must be disposed of in accordance with local, state and federal regulations.
Environmental Precautions:	Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

VII. Handling & Storage

Handling:	Follow good-standard industrial hygiene practice and provide adequate ventilation.
Storage:	Inert material under normal storage conditions. No specific precautions required.

VIII. Exposure Control / Personal Protection

Exposure Controls

Engineering Controls:	During thermal processing, maintain a continuous supply of fresh air to the workplace together with the removal of processing fumes.
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Personal Protection

Hand Protection: Protective gloves

Eye/Face Protection: Safety glasses with side-shields or chemical goggles. In addition, use full-face shield when cleaning processing fume condensates from hood, ducts, and other surfaces.

Skin Protection: Long sleeved clothing

Respiratory Protection: If airborne dust is produced through handling, grinding, sanding or sawing molded parts, and is not adequately controlled through ventilation, use a respirator approved for protection from dust. When using this product at elevated temperatures, implement engineering systems, administrative controls or a respiratory protection program (including a respirator approved for protection from organic vapors, acid gases and particulate matter) if processing fumes are not adequately controlled or operators experience symptoms of overexposure. If dust of powder is produced from secondary operations such as sawing or grinding, use a respirator approved for protection from dust.

Hygiene Measures: When using, do not eat, drink or smoke.

IX. Physical & Chemical Properties

Appearance:	Golden brown powder	Specific Gravity:	1.30-1.60
Physical State:	Solid	pH:	N/A
Boiling Point:	N/A	Solubility In Water	Insoluble
Melting Point:	N/A	Vapor Pressure:	N/A
Flash Point:	Does not flash	Vapor Density:	N/A
Ignition Temperature:	N/A	Evaporation Rate:	N/A
Thermal Decomposition:	750 °C	% Volatiles:	< 0.5% by weight



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X. Stability & Reactivity

Stability:

Stable at normal conditions. Hazardous polymerization does not occur. Does not burn or melt.

Hazardous Decomposition Products:

Processing fumes evolved above recommended processing conditions may include trace levels of hydrocarbon fragments, phenols, other substituted hydrocarbons, carbon dioxide and carbon monoxide.

Conditions to Avoid:

To avoid thermal decomposition, do not heat above 750 °C

XI. Toxicological Information

Toxicological testing has shown PBI polymer to be essentially innocuous. Inhalation studies with rats using specially prepared fine PBI particles produced no adverse effects.

XII. Ecological Information

Ecological Information:

Do not flush into surface water or sanitary sewer system.

Other information:

Ecological damages are not known or expected under normal use.

XIII. Disposal Considerations

Waste Disposal:

Recycling is encouraged. Material is not hazardous and can be landfilled or incinerated in accordance with federal, state and local requirements.

US EPA Waste number:

None

XIV. Transport Information

Transport Classification:

Not regulated as hazardous for shipment under current transportation guidelines.



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XV. Regulatory Information

TSCA (USA): Listed

DSL/NDSL (Canada): Listed

EINECS/ELINCS (Europe): Listed

Other Inventory Information:

A "Listed" entry above means all chemical components are on the respective inventory list and/or a qualifying exemption exists for one or more components.

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

XVI. Other Information

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