



## Competitive Green Technologies

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bio-composite resin solutions



### Materials Safety Data Sheet DECEMBER 2017

Section 1: Chemical Product and Company Identification and Recommended Use
Trade Name: BCR-BBMB- Masterbatch Resins– Commercial Product – Polystyrene Carrier Resin
May be used to produce moulded or extruded articles or as a component of other industrial products.
Emergency phone number: 519 329 2525
Molecular weight: NA

Section 2: Composition and Information on Ingredients
Chemical name: Bio-Masterbatch with non-food and non-forest BioBlack. CAS Nos: 68608-59-3; 9003-55-8; 9003-53-6
BioBlakr® 45%-50%
Polystyrene 55%-50%
Quantities represent typical or average values for the materials shown
Toxicological data on ingredients - NA

Section 3: Hazards Identification
Potential Acute Health Effects: Can burn in a fire creating dense smoke and smell of burnt bio-mass
Fumes produced during melt processing may cause eye skin and respiratory tract irritation.
Avoid severe over-exposure to fumes
Pellets with slight or no odour
HMIS Rating: Health = 0; Flammability = 1 Reactivity = 0
Skin Contact: Not a hazard with pellets during normal industrial use
Eye contact: Mechanically irritating to eyes like any other inert material
Inhalation: Unlikely due to physical form (pellets)
Ingestion: Unlikely due to physical form (pellets)
Sensitization: No info available
Processing issues: Processing vapours may cause irritation to the eyes, skin and respiratory tract. Severe exposure may cause nausea and headache. Vapour may cause irritation and injury to skin.
No known health effects aggravated by exposure to this product.

#### Section 4: First Aid Measures

If inhalation: Accidental inhalation of fumes from overheating or combustion, move to fresh air – if symptoms persist, call a physician.

On skin contact: Immediately cool the skin by rinsing with cold water after contact with hot material. Wash off immediately with soap and lots of water. Consult a physician if any irritation or signs of burn persist.

On contact with eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a physician.

On Ingestion: No hazards warranting special first aid measures

Precautions: Processing vapours inhalation may be irritating to the respiratory tract. Remove victim from source of contamination to fresh air and obtain medical advice.

#### Section 5: Fire and Explosion Data

Explosive limits and auto-ignition temperature: not determined

Suitable extinguishing media: Water spray mist or foam

Unsuitable extinguishing media for safety measures: Carbon Dioxide and dry chemical are not recommended because their lack of cooling capacity may permit re-ignition.

Hazards from Combustible Products: Fire will produce dense black smoke containing hazardous combustion products, carbon oxides and hydrocarbon fragments.

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective equipment are needed before entering fire area. Fight fire from a safe distance and a protected location due to the potential of hazardous vapours and decomposition products.

#### Section 6: Accidental Release Measures

Leak/Spill: Wear slip-resistant footwear. Sweep up and shovel into suitable containers for disposal. Do not create a powder cloud by using a brush or compressed air.

Personal precaution: section 8 below.

Environmental precautions: Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

#### Section 7: Handling and Storage

Handling: Handle in accordance with good industrial hygiene and safety practices. Provide for appropriate exhaust ventilation and dust collection on machinery. Avoid dust formation. All metal parts of the mixing and processing equipment must be earthed.

Storage: Store in closed container in a dry and cool area, Keep away from sources of ignition.

Section 8: Exposure Controls/Personal Protection
Engineering Controls: Use procedures in accordance with good industrial hygiene and safety practice. Processing fume condensate may be a fire hazard and toxic – remove periodically from exhaust hoods, ductwork, and other surfaces using appropriate personal protection.
Exposure limits: 2 mg/cu m – respiratable particulate containing Agricultural fibers.
Hand Protection: proactive gloves recommended to be worn
Eye Protection: at elevated temperature, if this product is used, implement a respiratory protection program.
Body Protection: Long sleeved clothing.
Hygiene Measures: when using product, do not eat, drink or smoke.

Section 9: Physical and Chemical Properties
Physical Status: Solid; Appearance: Pellets; could vary in colour; Odor: None or slight.
Melting point/range: It softens gradually over a wide range of temperatures and does not have a sharp melting point.
Auto-ignition temperature: no info available
Vapour pressure: negligible
Water Solubility: Insoluble
Evaporation Rate: Negligible
Specific gravity: less than 1 (water = 1)
VOC Content (%): Negligible
Explosive limits – upper and lower – Neither determined

Section 10: Stability and Reactivity
Stability: Stable under ambient conditions. Hazardous polymerisation does not occur.
Conditions to Avoid: Do not allow product to remain in barrel at elevated temperatures for extended periods of time. Excess heat and incompatible materials should be avoided.
Hazardous Decomposition Products: Process vapours under recommended processing conditions may include trace levels of hydrocarbons, carbon oxides, aldehydes, alcohols, organic acids.

Section 11: Toxicological Information
<u>Acute Toxicity</u>
LD50/oral/rat: NA
LD50/dermal/rabbit: NA
Inhalation: Pellet inhalation unlikely due to physical form
Eye Contact: Resin particles, like other inert materials, are mechanically irritating to eyes
Skin Contact: Not a hazard with pellets during normal industrial use.
Ingestion: Pellet ingestion unlikely due to physical form.
Chronic Toxicity: No info available
Subchronic Toxicity: No info available
Primary Irritation: Substance does not generally irritate and is only mildly irritating to the skin.
IARC: not listed; NTP: not tested

Section 12: Ecological Considerations
Ecotoxicity Effects: Do not flush into surface water or sanitary sewer system.
Other information: Ecological damages are not know or expected under normal use.

Section 13: Disposal Considerations
Water Disposal: Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

Section 14: Transport Information
Transport Classification: Not regulated as hazardous for shipment, unless noted below, under current transportation guidelines.
<u>DOT, ADR/RID/AND; IMDG; ICAO</u>
<u>IATA-DGR; MEXICO</u>

Section 15: Regulatory Information	
International Inventories:	
TSCA (USA):	Not Listed
DSL (Canada):	Not Listed

Section 16: Other Information and References	
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