

Material Safety Data Sheet

BioBest® Biopolymer

MSDS DATE: January 21, 2010

SECTION 1: Product and Company Identification

Product Name	BioBest® Biopolymer
Synonyms	BioBest® Bio-Co-Polymer, BioBest® Biocomposite
Product Code	BioBest® SG Biopolymer
Manufacturer	Bio-Plastic Solutions, LLC
Address	526 3rd Street NE Blooming Prairie, MN 55917
Telephone	507-583-0097
Fax	507-583-0095
Product Use	Biobased thermoplastic material and profile extruded products for interior architectural and furniture applications.
Product Names	BioEdge® Edgebanding, BioBead™ Corner Bead, BioGuard™ Wall Guards

SECTION 2: Composition/Information on Ingredients

Ingredients List:

Component Material	% of Composition	OSHA Exposure Limits
Proprietary Biopolymer Resin		
primarily Polylactide Resin	>51	None
Proprietary Processing Aids	<49	None
Primary Biopolymer Resin ingredients that are potentially hazardous per OSHA definitions	<1 (0.1 for carcinogens)	None

OSHA PEL TWA:	15 mg/mg ³ for total dust, 5 mg/mg ³ for respirable particulates.
ACGIH TLV TWA:	10 mg/mg ³ for inhalable particulates, 3 mg/mg ³ for respirable particulates.

Section 2 Notes:

This product may generate Particulates Not Otherwise Classifiable (PNOC). Refer to the table above for OSHA and ACGIH standards regarding airborne particulates.



SECTION 3: Hazards Identification

Emergency Overview: CAUTION: May cause eye/skin irritation. Avoid contact with skin and eyes. Burning may produce obnoxious fumes. Avoid formation of dust.

Routes of Entry: Ingestion-mouth; Inhalation-nose, mouth.

POTENTIAL HEALTH EFFECTS

- 🌿 **Eyes** : Contact of dust or pellets with eyes may cause mechanical irritation.
- 🌿 **Skin** : Contact with of dust or pellets with skin may cause slight skin irritation.
- 🌿 **Ingestion** : Ingestion of dust or pellets may cause gastrointestinal irritation, nausea, vomiting or diarrhea. No organ effects were noted following ingestion or dermal exposure to the primary ingredients in animal studies. The processing aid minor additive used within this material contains small percentages of vinyl acetate. Vinyl acetate is classified as a 2B in accordance with the IARC.
- 🌿 **Inhalation** : Inhalation of dust may cause shortness of breath, chest tightness, coughing or throat soreness.
- 🌿 **Molten Material** : Molten polymers may cause burning when contacted by skin.
- 🌿 **Acute Health Standards** : None known
- 🌿 **Chronic Health Standards** : None known
- 🌿 **Medical Conditions Generally Aggravated by Exposure** : None known

SECTION 4: First Aid Measures

- 🌿 **Eyes** : Rinse immediately with clean water
- 🌿 **Skin** : The compound or components is not likely to be hazardous by skin contact. Molten polymers can cause burning. Cool skin rapidly with cold water after contact with hot polymer.
- 🌿 **Ingestion** : Drink water as a precaution. No specific intervention is indicated as the compound is not known to be hazardous by ingestion.
- 🌿 **Note to Physician or First Aid Providers**

SECTION 5: Hazards Identification

METHOD USED

Flammable Limits in air (% by Volume)

🌿 Upper: Not determined

🌿 Lower: Not determined.

Flash Point

🌿 °F: Not determined

🌿 °C: Not determined.

Auto Ignition Temperature

🌿 °F: Polylactide resin - 730

🌿 °C: Polylactide resin - 388



Extinguishing Media: Foam, Water, Carbon Dioxide (CO₂) and Dry Chemical are suitable extinguishing agents.

Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus and protective equipment.

Unusual Fire and Explosion Hazards: Fine dust in the air may ignite. Avoid accumulation of dust on floors and horizontal surfaces to minimize potential flame spread or explosive conditions.

Hazardous Decomposition Products: Burning produces fumes containing aldehydes, carbon monoxide (CO) and carbon dioxide (CO₂).

SECTION 6: Accidental Release Measures

- 🌿 **Personal Precautions:** Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Avoid contact with eyes and skin.
- 🌿 **Environmental Precautions:** Do not flush into surface water or sanitary sewer system.
- 🌿 **Methods for Clean-Up:** Sweep up and shovel into suitable container for disposal.

SECTION 7: Handling and Storage

Safe Handling: Avoid contact with skin and eyes. Avoid dust formation. During fabrication that produces molten material workers should wear protective gloves and eyewear.

Storage: Store in a cool place below 122°F (50°). No special restrictions for storage with other products.

Other Precautions: Avoid dust formation.

SECTION 8: Exposure Controls/Personal Protection

Engineering Controls: Provide appropriate ventilation at places where dust is formed.

Respiratory Protection: Respirator must be worn if exposed to dust.

Eye Protection: Eye protection must be worn when sawing or installing product. Use approved safety glasses.

Skin Protection: Wear gloves when handling molten or heated material.

Other Protective Clothing or Equipment: Impervious clothing.

Work Hygienic Practices: Avoid contact with eyes, skin or clothing.

Exposure Guidelines: See Section 3

SECTION 9: Physical and Chemical Properties

Appearance: Opaque, light tan natural color.

Odor: None.

Physical State: Solid pellet before extrusion. Molten or heated during extrusion process. Solid profile after extrusion.

pH: Not applicable.

Boiling Point

°F: Not applicable

°C: Not applicable

Melting Point

°F: 320-356°F

°C: 160-180°C

Decomposition Temperature

°F: 482°F

°C: 250°C

Freezing Point

°F: Not applicable

°C: Not applicable

Vapor Pressure (mmHg) @

°F: Not determined

°C: Not determined

Vapor Density (air = 1) @

°F: Not determined

°C: Not determined

Solubility in Water: This product is insoluble in water.

SECTION 10: Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid (stability-related): Avoid temperatures above 446 F / 230 C.

Incompatibility (materials to avoid): Oxidizing agents.

Hazardous Decomposition or By-products: Burning this product produces aldehydes, carbon monoxide (CO) and carbon dioxide (CO₂).

SECTION 11: Toxicological Information

Principal areas of exposure: Eyes. Skin. Ingestion. Inhalation.

Toxicity: There were no organ effects noted following ingestion or dermal exposure in animal studies.

Section 11 Notes: This product did not cause skin allergic reactions in skin sensitivity studies. Product dust may be irritating to eyes, skin and respiratory system. Ingestion may cause gastrointestinal irritation, nausea, vomiting or diarrhea. This product did not cause skin irritation and/or dermatitis in studies with guinea pigs. No mutagenic effects, carcinogenic effects, target organ effects or reproductive toxicological effects are known to result from exposure to this product.

SECTION 12: Ecological Information

Ecotoxicity effects: EC50/72h/algae > 1100 mg/L.

Bioaccumulation: This product does not bioaccumulate. It is inherently biodegradable.

SECTION 13: Disposal Considerations

Waste Disposal Method: In accordance with local and national regulations. Do not contaminate lakes, ponds, waterways or ditches with chemicals or used containers. Preferred options for disposal are: (1) recycling; (2) composting; (3) incineration with energy recovery; or (4) landfill.

SECTION 14: Transport Information

US Department of Transportation Road Transportation

Proper Shipping Name	None
Hazard Class	Not regulated
ID Number	None
Packing Group	None
Label Statements	None

Water Transportation

Proper Shipping Name	None
Hazard Class	Not regulated
ID Number	None
Packing Group	None
Label Statements	None

Air Transportation

Proper Shipping Name	None
Hazard Class	Not regulated
ID Number	None
Packing Group	None
Label Statements	None



SECTION 15: Regulatory Information

Section 15 Note: Not meant to be all inclusive-selected regulations listed below.

US Federal Regulations

TSCA Information (Toxic Substance Control Act): Not listed.

CERCLA Information (Comprehensive Response Compensation and Liability Act)

SARA Title III Information (Superfund Amendments and Reauthorization Act): Not Listed

311/312 Hazard Categories

313 Reportable Ingredients

State Regulations

International Regulations

SECTION 16: Other Information

Other Information: The information in this Material Safety Data Sheet relates only to the specific materials and components designated herein and does not relate to use in combinations with any other material or in any other process.

Disclaimer: The information herein is provided in good faith but no warranty, express or implied, is made. Consult Bio-Plastic Solutions, LLC for further information.

Recommended Restrictions: Bio-Plastic Solutions, LLC Non-Disclosure Agreement.

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Prepared by: Bio-Plastic Solutions, LLC.

