

Cardia Biohybrid™ BL-M

Rigid Moulding Resin

Renewable Resource based Masterbatch (Blendable)

Description

Cardia Biohybrid™ BL-M is based on a blend of thermoplastic starch (TPS) and polyolefin's. This grade of resin is compatibilised to offer a high level of mechanical strength, good elongation properties and toughness. The resin is based on corn starch which is an annually renewable material.

- A hybrid masterbatch with high content of renewable resources in Polypropylene (PP) for moulding rigid products.
- For applications where the use of renewable resources or sustainability are desired and Biodegradability is not required.
- Can be used by blending Cardia Biohybrid™ BL-M masterbatch with PP in injection moulding and extrusion applications.

Specifications and Compliances

Cardia Biohybrid™ BL-M is formulated with 66% of renewable starch. This versatile material is suitable for a wide range of products manufactured by injection molding, extrusion or blow molding processes.

Due its content of polyolefins the material is not a fully biodegradable polymer and is not intended for ultimate disposal in commercial composting facilities. For applications in which biodegradability/compostability is required we recommend the usage of Cardia Compostable B-M or T-BM resin.

Application Examples

- Injection moulded products such as cutlery, toothbrushes, combs, shavers, golf-tees, etc.
- Stakes and pegs
- Horticultural products such as flower pots, planters and stakes
- Injection moulded caps and closures
- Sheet extruded products such food trays, tubs, disposable plates, strapping and labels
- Blow moulded bottles and toys
- Profile extruded products such as candy sticks and disposable drinking straws

Physical Properties of Cardia Biohybrid™ BL-M Resin

Properties	Test Method	Value	Unit
Melt flow index	ASTM D1238	3.6	g /10 min (2.16 kg/ 190°C/ 374°F)
Density	ASTM D792	1.11	g/cm ³
Melting Temperature Range	ASTM D3418	90 – 100	°C
Moisture Content	CBP method	<0.6	%

Physical Properties of a Typical Cardia Biohybrid™ BL-M Molding

Properties	Test Method	Value	Unit
Tensile Modulus	ASTM D638	> 23	MPa
Tensile Strength at Yield	ASTM D638	> 23	MPa
Tensile Strength at Break	ASTM D638	> 23	MPa
Elongation at Break	ASTM D638	> 150	%
Izod Notched - Impact Resistance	ASTM D256	3.4	kJ/m ²

Note: Above properties are based on a typical test molding made from a blend of 30% BL-M, and 70% PP

Transport, Storage and Handling

Cardia Bioplastics™ Materials should be transported, stored and handled in cool and dry environments without exposure to direct sunlight. More information can be retrieved from the Processing Guidelines available through your Cardia Bioplastics™ sales representative.

Safety

Material Safety Data Sheets (MSDS) are available. Please contact your Cardia Bioplastics™ sales representative.

Processing Conditions

Cardia Biohybrid™ BL-M materials can be easily processed on standard plastic process equipment. Processing guidelines are unique to this material and are available on request from the Cardia Bioplastics™ sales representative.

Food Contact

In certain applications Cardia Biohybrid™ BL-M can be suitable for direct contact with foodstuffs as per Directive 2002/72/EC (previously 90/128/EWG and amendments). More information can be found in the Info "FOOD CONTACT Compliance of Cardia Biohybrid Resins" available on our Website. In order to discuss a specific food contact application please contact Cardia Bioplastics' Technical Service.

Disclaimer

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