Cardia Biohybrid™ BL-F02

Film Blowing / Blow Moulding Resin

Renewable Resource based Masterbatch (Blendable)

Description

Cardia Biohybrid™ BL-F02 masterbatch is a homogenous blend of thermoplastic starch (TPS) with polyethylene (PE). This blendable grade is compatibilised to offer a high level of mechanical strength, outstanding elongation properties and toughness. The resin is based on corn starch which is a renewable material. This TPS/PE masterbatch can be blended with a wide range of polyolefin materials to tailor a product with properties perfectly matched to the application.

- A Biohybrid resin for film applications offering a significant reduction in carbon footprint (compared to PE)
- An effective contribution to sustainability where biodegradability/compostability is not required.
- Blendable with LDPE, LLDPE, HDPE and PP resins.
- Used for thin and thick gauge film and blow moulding applications.

Specifications and Compliances

Cardia Biohybrid™ BL-F02 is formulated with 66% of annually renewable starch. This versatile resin is suitable for a wide range of products manufactured by blown film extrusion and extrusion blow molding as well as injection molding processes. Due its content of polyolefins the material is not a compostable 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-F resin.

Application Examples

- Shopping bags/Check-out bags
- Garbage bags
- Leaf litter bags
- Bin liners
- Overwrap Packaging
- Disposable or industrial bottles

Physical Properties of Cardia Biohybrid BL-F02 Resin

Properties	***Test Method***	**Value**	**Unit**
Melt flow index	ASTM D1238	1.2	g /10 min (2.16 kg/190˚C/374˚F)
Density	ASTM D792	1.18	g/cm^3
Melting Temperature Range	ASTM D3418	90 - 100	deg. C
Moisture Content	Internal	<0.6	%

Physical Properties of a Typical Cardia Biohybrid BL-F02 Film

Properties	***Test Method***	**Value**	**Unit**
Tensile strength at yield	ASTM D883	> 25	MPa
Tensile strength at break	ASTM D883	> 20	MPa
Elongation at break	ASTM D883	> 330	%
Impact Resistance-Dart Test	ASTM D1709	200	g
Tear Resistance	ASTM D1922	130	N

Note: *Above film properties are based on a 30 µm blown film made from a blend of 50% BLF, 30% LLDPE and 20% LDPE*

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-F02 blends can be easily processed on standard plastics processing 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-F02 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.