

DuPont™ Biomax® PTT 1002

Biomax® PTT resins Product Data Sheet

Description

Product Description	<p>Biomax® PTT 1002 is a bio-sourced polyester resin made from propanediol and terephthalic acid.</p> <p>Biomax® PTT 1002 is a polymer that offers unique property advantages in a variety of packaging and industrial applications.</p> <p>Biomax® PTT 1002 can be processed using conventional processing equipment including: injection-molding, blown-film, cast-film, extrusion-coating.</p>
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Restrictions

Material Status	<ul style="list-style-type: none"> • Developmental: Active
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Typical Characteristics

Uses	<ul style="list-style-type: none"> • Containers Packaging
Composition	37% By Weight Bio-sourced
Features	1.02 dl/g Intrinsic Viscosity (IV), Goodyear R-103B equivalent IV in 50/50 wt% trifluoroacetic acid/dichloromethane solvent
Characteristics / Benefits	Biomax® PTT 1002 can be used in a variety of packaging and industrial applications.
Applications	Injection-molding, blown-film, cast-film, extrusion-coating.

Typical Properties

Physical	Nominal Values	Test Method(s)	
Density ()	1.3 g/cm ³	ASTM D792	ISO 1183
Melt Flow Rate (255°C/1.16kg)	19.3 g/10 min	ASTM D1238	ISO 1133
Thermal	Nominal Values	Test Method(s)	
Melting Point (DSC)	228°C (442°F)	ASTM D3418	ISO 3146

Processing Information

General	
Maximum Processing Temperature	260°C (500°F)
General Processing Information	<p>Biomax® PTT 1002 is typically processed with the range of 245°C to 260°C.</p> <p>All equipment used for processing Biomax® PTT 1002 should be externally ventilated.</p> <p>Drying Considerations: Biomax® PTT 1002 will contain < 0.2 wt% moisture, as received.</p>

For injection molding, Biomax® PTT 1002 pellets should be dried to a moisture content of < 0.015wt%.

For extrusion coating, cast film, or blown film, Biomax® PTT 1002 pellets should be dried to < 0.005 wt% moisture.

Dryers should be vented externally. Nitrogen or air with a minimum flow of 1 ft³/min./lb may be used in the dryer. A drying time of 4 hours at 120 ° - 130 °C with a dew point of -40 °C is suggested.

Polymer Melt Considerations:

Managing the thermal history of Biomax® PTT 1002 while it is molten is essential for successful commercial processing. For optimum processing, holdup times in the molten state should be minimized and polymer melt temperatures should not exceed 260 °C. For blending with polyester resins, a copolymer may better accommodate the processing window of Biomax® PTT 1002 than a standard homopolymer.

Safety Note:

If Nitrogen or Dessicated Air recycling is used for drying, watch for the build-up of volatiles such as acrolein in the recycle gas stream. Vents should be directed to prevent personnel exposure, and in accordance with local regulations. If possible vents would preferrably be directed external to the processing environment and locations where personnel operate or congregate.

The processing information contained in this datasheet is provided to customers to help them handle and process Biomax® PTT 1002. Customers should determine for themselves how to apply this information in their facilities. For additional information on safety, health and environmental concerns of Biomax® PTT 1002, refer to the MSDS or call a technical contact at DuPont.

FDA Status Information

Biomax® PTT 1002 Resin complies with Food and Drug Administration Food Contact Notification (FCN) #745, subject to the limitations and requirements therein. This FCN describes polymers that may be used as components in the manufacture of articles, except bottles, intended for use in contact with all food types under Conditions of Use C through H, as defined at:
<http://www.cfsan.fda.gov/~rdb/opa-fcn3.html>

The information and certifications provided herein are based on data we believe to be reliable, to the best of our knowledge. The information and certifications apply only to the specific material designated herein as sold by DuPont and do not apply to use in any process or in combination with any other material. They are provided at the request of and without charge to our customers. Accordingly, DuPont cannot guarantee or warrant such certifications or information and assumes no liability for their use.

Safety & Handling

Biomax® PTT 1002 as supplied by DuPont is not considered a hazardous material. As with any hot material, care should be taken to protect the hands and other exposed parts of the body when handling molten polymer. At recommended processing temperatures, small amounts of fumes may evolve from the resin. When resins are overheated, more extensive decomposition may occur. Adequate ventilation should be provided to remove the fumes from the work area. Disposal of scrap presents no special problems and can be handled by landfill or incineration in a properly operated incinerator. Disposal should comply with local, state and federal regulations. Resin pellets can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls.

For more detailed information on the safe handling of DuPont resins, a Product Safety Bulletin and OSHA Material Safety Data Sheet can be obtained from the DuPont Packaging and Industrial Products sales office serving you.

Read and Understand the Material Safety Data Sheet (MSDS) before using this product

Regional Centres

DuPont operates in more than 70 countries. For help finding a local representative, please contact one of the following regional customer contact centers:

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This data sheet is effective as of 05/07/2009 02:09:41 PM and supersedes all previous versions.