Crastin® ST820 BK503

PBT — Celanese

Product Texts

Common features of Crastin® thermoplastic polyester resin include mechanical and physical properties such as stiffness and toughness, heat resistance, friction and wear resistance, excellent surface finishes and good colourability. Crastin® thermoplastic polyester resin has excellent electrical insulation characteristics and high arc-resistant grades are available. Many flame retardant grades have UL recognition (class V-0). Crastin® thermoplastic polyester resin typically has high chemical and heat ageing resistance.

The good melt stability of Crastin® thermoplastic polyester resin normally enables the recycling of properly handled production waste.
If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Crastin® thermoplastic polyester resin typically is used in demanding applications in the electronics, electrical, automotive, mechanical engineering, chemical, domestic appliances and sporting goods industry.

Crastin® ST820 BK503 is an unreinforced, Super Tough polybutylene terephthalate resin for injection molding.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.8**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.7**	%	ISO 294-4, 2577
[C] Ejection temperature	**170**	°C	-
ASTM Data			
Mold Shrinkage, MD	**0.011**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.017**	mm/mm	ASTM D 955

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**1600**	MPa	ISO 527
[C] Yield stress	**36**	MPa	ISO 527
[C] Yield strain	**7**	%	ISO 527
[C] Nominal strain at break	**>50**	%	ISO 527
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**85**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**10**	kJ/m²	ISO 179/1eA
ASTM Data			
Tensile Modulus	**1600**	MPa	ASTM D 638
Tensile Strength	**37**	MPa	ASTM D 638
Elongation at Break	**145**	%	ASTM D 638
Flexural Modulus	**1682**	MPa	ASTM D 790
Flexural Strength	**53**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**N**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**117**	J/m	ASTM D 256
Temperature	**-40**	°C	-
Izod Impact unnotched, 1/8 in	**N**	J/m	ASTM D 256

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**225**	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**55**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**50**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**100**	°C	ISO 75-1/-2
[C] Burning rate, FMVSS, Thickness 1 mm	**38**	mm/min	ISO 3795 (FMVSS 302)
ASTM Data			
DTUL @ 66 psi	**120**	°C	ASTM D 648
DTUL @ 264 psi	**47**	°C	ASTM D 648
Melting Temperature	**225**	°C	ASTM D 3418

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	**23**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.021**	-	ASTM D 150
Dielectric Constant, 1 MHz	**3.7**	-	ASTM D 150
Surface Resistivity	**1E14**	Ohm	ASTM D 257
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
[C] Density	**1220**	kg/m³	ISO 1183
Density	**1230**	kg/m³	ASTM D 792

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion, Coating

Delivery form
Black

Special Characteristics
High impact or impact modified

Chemical Resistance
General Chemical Resistance

Applications
Automotive

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa