

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® HR5330HF is a 30% glass reinforced PBT with high flow (HF), moderately toughened, hydrolysis resistant (HR) resin. Excellent balance of properties between terminal pullout and impact resistance. Developed for USCAR Class 3 and 4 environments.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	8	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.0	%	ISO 294-4, 2577
^[C] Density of melt	1290	kg/m ³	-
^[C] Ejection temperature	170	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	8500	MPa	ISO 527
^[C] Stress at break	120	MPa	ISO 527
^[C] Strain at break	3.2	%	ISO 527
^[C] Charpy impact strength, +23°C	65	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	11	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	9	kJ/m ²	ISO 179/1eA

[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	65	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	207	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	221	°C	ISO 75-1/-2
^[C] Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Yellow Card available	yes	-	-
^[C] Burning rate, FMVSS, Thickness 1 mm	30	mm/min	ISO 3795 (FMVSS 302)

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	3.8	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.6	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	81	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	180	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E13	Ohm	IEC 62631-3-2

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PBT-I-GF30

Celanese

[C] Electric strength	32	kV/mm	IEC 60243-1
[C] Comparative tracking index	275	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	0.35	%	Sim. to ISO 62
[C] Humidity absorption	0.15	%	Sim. to ISO 62
[C] Density	1500	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Chemical Resistance

Hydrolytically Stable

Delivery form

Black

Regional Availability

North America, Europe, Asia Pacific, South and Central America

Special Characteristics

High impact or impact modified

Other text information**Injection molding**

Use of hot-runners is possible with Crastin® HR resins.

However we do not recommend temperature settings above 270°C and residence times at 265°C should be below 10 minutes.

In case of longer residence times using hot-runners, for example after a shut-down, the complete system must be purged with glass reinforced Crastin® (type SK602/605) before starting up again.

For successful processing of Crastin® HR with hot-runners, care should be taken to maintain a uniform temperature, avoid hot-spots and long residence times.