

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® HR5315HFS is a 15% glass reinforced PBT with high flow, moderately toughened, hydrolysis resistant (HR) polybutylene terephthalate for injection molding.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	13	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	0.5	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.1	%	ISO 294-4, 2577
^[C] Density of melt	1140	kg/m ³	-
^[C] Ejection temperature	170	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	5000	MPa	ISO 527
^[C] Stress at break	95	MPa	ISO 527
^[C] Strain at break	3.3	%	ISO 527
^[C] Charpy impact strength, +23°C	57	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	6	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	60	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	200	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	220	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	38	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	160	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
^[C] Burning rate, FMVSS, Thickness 1 mm	32	mm/min	ISO 3795 (FMVSS 302)
^[C] Oxygen index	20	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Dissipation factor, 100Hz	100	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	100	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	3E13	Ohm	IEC 62631-3-2
^[C] Electric strength	35	kV/mm	IEC 60243-1

[C] Comparative tracking index	575	-	IEC 60112
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[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	0.4	%	Sim. to ISO 62
[C] Humidity absorption	0.15	%	Sim. to ISO 62
[C] Density	1380	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	Value	Unit	Test Standard
ISO Data			
[C] Viscosity number	110	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Special Characteristics

High impact or impact modified

Delivery form

Pellets, Black

Chemical Resistance

Hydrolytically Stable

Additives

Release agent

Regional Availability

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

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.