Crastin® SK605 NC010

PBT-GF30 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® SK605 NC010 is a 30% glass fiber reinforced, lubricated polybutylene terephthalate resin for injection molding.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**7**	cm³/10min	ISO 1133
Temperature	**250**	°C	-
Load	**2.16**	kg	-
[C] Molding shrinkage, parallel	**0.3**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.1**	%	ISO 294-4, 2577
[C] Density of melt	**1360**	kg/m³	-
[C] Thermal conductivity of melt	**0.28**	W/(m K)	-
[C] Spec. heat capacity of melt	**1730**	J/(kg K)	-
[C] Ejection temperature	**170**	°C	-
ASTM Data			
Mold Shrinkage, MD	**0.003**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.01**	mm/mm	ASTM D 955

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**10000**	MPa	ISO 527
[C] Stress at break	**140**	MPa	ISO 527
[C] Strain at break	**2.7**	%	ISO 527
[C] Tensile creep modulus, 1h	**9000**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**6600**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**70**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**75**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**10**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**11**	kJ/m²	ISO 179/1eA
ASTM Data			
Tensile Modulus	**10000**	MPa	ASTM D 638
Tensile Strength	**140**	MPa	ASTM D 638
Elongation at Break	**2.6**	%	ASTM D 638
Compressive Strength	**202**	MPa	ASTM D 695
Flexural Modulus	**8965**	MPa	ASTM D 790
Flexural Strength	**200**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**112**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**101**	J/m	ASTM D 256
Temperature	**-40**	°C	-

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**224**	°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	**205**	°C	ISO 75-1/-2

[C] Temp. of deflection under load, 0.45 MPa	**220**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**215**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**30**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**90**	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	-
Yellow Card available	**yes**	-	-
[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	**41**	mm/min	ISO 3795 (FMVSS 302)
[C] Oxygen index	**19**	%	ISO 4589-1/-2
ASTM Data			
UL 94 Flame rating	**HB**	-	UL 94
Thickness tested	**0.75**	mm	-
Coefficient of Thermal Expansion, MD	**30**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**90**	E-6/K	ASTM D 696
DTUL @ 66 psi	**220**	°C	ASTM D 648
DTUL @ 264 psi	**205**	°C	ASTM D 648
Melting Temperature	**225**	°C	ASTM D 3418
Limiting Oxygen Index	**19**	%	ASTM D 2863

[C]: CAMPUS

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**3.9**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.8**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**7.5**	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	**>1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**38**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**400**	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	**23**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.018**	-	ASTM D 150
Dielectric Constant, 1 MHz	**3.8**	-	ASTM D 150
Surface Resistivity	**>1E15**	Ohm	ASTM D 257
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

[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	**1530**	kg/m³	ISO 1183
Density	**1530**	kg/m³	ASTM D 792

[C]: CAMPUS

Material specific properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Viscosity number	**100**	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Profile Extrusion, Other Extrusion

Delivery form
Pellets, Natural Color

Additives
Lubricants, Release agent

Features
Weldable

Chemical Resistance
General Chemical Resistance

Applications
Automotive, General Purpose

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