Crastin® FRHR5325NH BK591LM

THERMOPLASTIC POLYESTER RESIN

Crastin® FRHR5325NH BK591LM is a 25% Glass Reinforced, Flame Retardant, Non-Halogenated, Hydrolysis resistant, Polybutylene Terephthalate

Product information

Resin Identification	PBT-GF25 FR(40+30)	ISO 1043
Part Marking Code	>PBT-GF25 FR(40+30)<	ISO 11469

Rheological properties

Molding shrinkage, parallel	0.4	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1.31E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	12300	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9	%	ISO 527-1/-2
Flexural modulus	1.28E6	psi	ISO 178
Flexural strength	18900	psi	ISO 178
Charpy impact strength, 23°C	14.7	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	2.24	ftlb/in²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	428	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	149	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	383	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.16	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, -40-23°C	0.15	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, 55-160°C	0.0889	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.778	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, -40-23°C	0.417	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, 55-160°C	0.772	E-4/°F	ISO 11359-1/-2
Thermal conductivity, flow	0.36	W/(m K)	ISO 22007-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.0295	in	IEC 60695-11-10
UL recognition	yes		UL 94
Glow Wire Flammability Index, 0.75mm	1760	°F	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	1760	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	1340	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 1.5mm	1340	°F	IEC 60695-2-13

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Glow Wire Ignition Temperature, 3.0mm	1430	°F	IEC 60695-2-13
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	in/min	ISO 3795 (FMVSS 302)

Electrical properties

Relative permittivity, 100Hz	3.59		IEC 62631-2-1
Relative permittivity, 1000Hz	3.94[OT]		IEC 62631-2-1
Relative permittivity, 1MHz	3.52		IEC 62631-2-1
Dissipation factor, 100Hz	96	E-4	IEC 62631-2-1
Dissipation factor, 1000Hz	32[OT]	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	154	E-4	IEC 62631-2-1
Volume resistivity	>1E13[DS]	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15[DS]	Ohm	IEC 62631-3-2
Comparative tracking index	600		IEC 60112

[OT]: One time tested

[DS]: Derived from similar grade

Physical/Other properties

Humidity absorption, 2mm	0.1[DS]	%	Sim. to ISO 62
Water absorption, 2mm	0.25[DS]	%	Sim. to ISO 62
Density	0.0549	lb/in^3	ISO 1183

[DS]: Derived from similar grade

Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.04	%
Melt Temperature Optimum	482	°F
Min. melt temperature	464	°F
Max. melt temperature	500	°F
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	266	°F
Hold pressure range	≥8700	psi
Hold pressure time	0.0762	s/mil
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h^2+2	s
Back pressure	as low as possible	psi
Ejection temperature	338	°F

Automotive

OEM	STANDARD
Renault-Nissan	UB25c, No Spec, Special Part Approval, See Your CE Account Manager.

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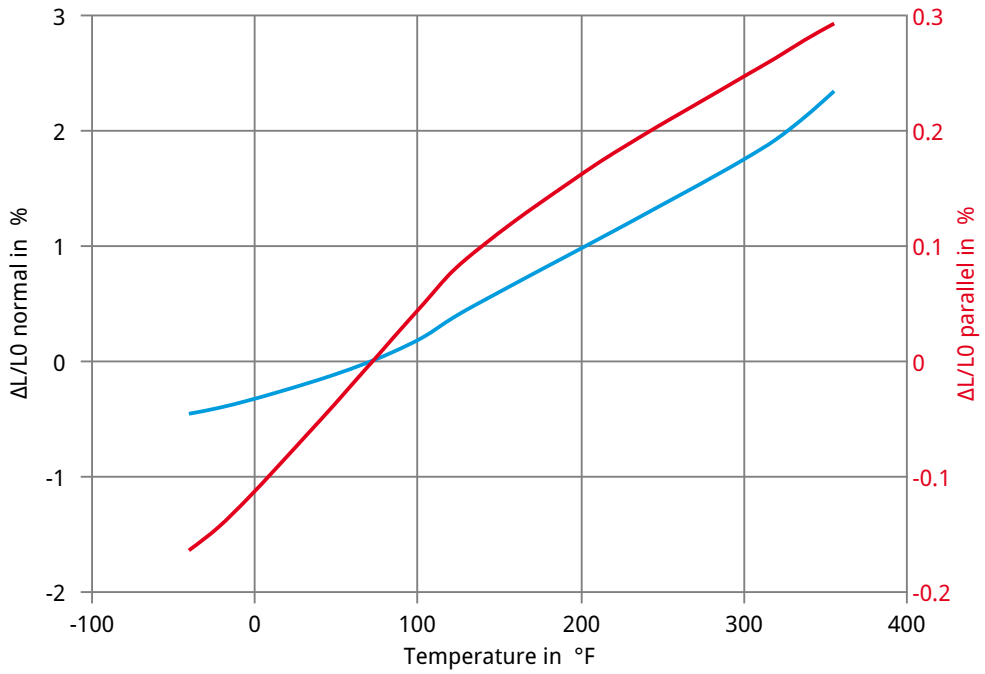
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Renault-Nissan	UB27b, No Spec, Special Part Approval, See Your CE Account Manager.
Renault-Nissan	UB28a, No Spec, Special Part Approval, See Your CE Account Manager.

Characteristics

Processing	Injection Molding
Additives	Flame retardant, Non-halogenated/Red phosphorus free flame retardant
Special characteristics	Flame retardant, Hydrolysis resistant, Laser Markable

Thermal expansion



Revised: 2026-02-28 Source: Celanese Materials Database

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