

## DuPont Performance Polymers Crastin® LW9020FR NC010 PBT+ASA (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , PBT + ASA Blend, Glass Fiber Reinforced

### Material Notes:

20% Glass Reinforced Flame Retardant Polybutylene Terephthalate Blend with Low Warpage Characteristics Crastin LW9020FR NC010 is a 20% glass fiber reinforced flame retardant polybutylene terephthalate blend for injection molding. It has improved surface information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Crastin-LW9020FR-NC010-PBTASA-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-LW9020FR-NC010-PBTASA-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in <sup>3</sup>	
	1.52 g/cc	0.0549 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.78 %	0.78 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.230 %	0.230 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	110 MPa	16000 psi	ISO 527-1/-2
Tensile Stress	16.22 MPa	2353 psi	ISO 11403-1 -2
	@Strain 0.260 %, Temperature 40.0 °C	@Strain 0.260 %, Temperature 104 °F	
	17.6 MPa	2550 psi	ISO 11403-1 -2
	@Strain 0.400 %, Temperature 90.0 °C	@Strain 0.400 %, Temperature 194 °F	
	43.3 MPa	6280 psi	ISO 11403-1 -2
	@Strain 0.580 %, Temperature 23.0 °C	@Strain 0.580 %, Temperature 73.4 °F	
	46.1 MPa	6690 psi	ISO 11403-1 -2
	@Strain 1.62 %, Temperature 90.0 °C	@Strain 1.62 %, Temperature 194 °F	
	53.1 MPa	7700 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 2.80 %, Temperature 90.0 °C	@Strain 2.80 %, Temperature 194 °F	ISO 11403-1 -2
	55.58 MPa	8061 psi	
	@Strain 0.980 %, Temperature 40.0 °C	@Strain 0.980 %, Temperature 104 °F	ISO 11403-1 -2
	76.95 MPa	11160 psi	
	@Strain 1.14 %, Temperature 23.0 °C	@Strain 1.14 %, Temperature 73.4 °F	ISO 11403-1 -2
	78.69 MPa	11410 psi	
	@Strain 1.71 %, Temperature 40.0 °C	@Strain 1.71 %, Temperature 104 °F	ISO 11403-1 -2
	97.03 MPa	14070 psi	
	@Strain 1.71 %, Temperature 23.0 °C	@Strain 1.71 %, Temperature 73.4 °F	ISO 11403-1 -2
Elongation at Break	2.0 %	2.0 %	ISO 527-1/-2
Tensile Modulus	8.50 GPa	1230 ksi	ISO 527-1/-2
Flexural Strength	155 MPa	22500 psi	ISO 178
	4.29 GPa	622 ksi	
Secant Modulus	@Strain 1.93 %, Temperature 40.0 °C	@Strain 1.93 %, Temperature 104 °F	ISO 11403-1 -2
	5.30 GPa	769 ksi	
	@Strain 1.91 %, Temperature 23.0 °C	@Strain 1.91 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.67 GPa	823 ksi	
	@Strain 0.980 %, Temperature 40.0 °C	@Strain 0.980 %, Temperature 104 °F	ISO 11403-1 -2
	6.24 GPa	905 ksi	
	@Strain 0.260 %, Temperature 40.0 °C	@Strain 0.260 %, Temperature 104 °F	ISO 11403-1 -2
	6.75 GPa	979 ksi	
	@Strain 1.14 %, Temperature 23.0 °C	@Strain 1.14 %, Temperature 73.4 °F	ISO 11403-1 -2
	7.47 GPa	1080 ksi	
	@Strain 0.580 %, Temperature 23.0 °C	@Strain 0.580 %, Temperature 73.4 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ISO 180/1A

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180/1A
Izod Impact, Unnotched (ISO)	33.0 kJ/m <sup>2</sup>	15.7 ft-lb/in <sup>2</sup>	ISO 180/1U
	33.0 kJ/m <sup>2</sup>	15.7 ft-lb/in <sup>2</sup>	ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/1eU
	3.50 J/cm <sup>2</sup>	16.7 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.700 J/cm <sup>2</sup>	3.33 ft-lb/in <sup>2</sup>	ISO 179/1eA
	0.650 J/cm <sup>2</sup>	3.09 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	7500 MPa	1.09e+6 psi	ISO 899-1
	@Time 3600 sec	@Time 1.00 hour	
Tensile Creep Modulus, 1000 hours	6000 MPa	870000 psi	ISO 899-1
	@Time 3.60e+6 sec	@Time 1000 hour	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 µm/m-°C	16.7 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.90 J/g-°C	0.454 BTU/lb-°F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft <sup>2</sup> -°F	of melt
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	215 °C	419 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	175 °C	347 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093

Electrical Properties	Metric 14 ohm	English 4 ohm	Comments
Dielectric Constant	3.5	3.5	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.7	3.7	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	29.0 kV/mm	737 kV/in	IEC 60243-1
	20.0 kV/mm	508 kV/in	Short Time; IEC 60243-1
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	20.0 kV/mm	508 kV/in	20s; IEC 60243-1
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	29.0 kV/mm	737 kV/in	Short Time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0030	0.0030	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.015	0.015	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.015	0.015	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	300 V	300 V	IEC 60112

Descriptive Properties	Value	Comments
Additives	Release agent	
Delivery Form	Pellets	
Part Marking Code	>PBT+ASA-GF20FR(17)<	ISO 11469
Processing	Injection Moulding	
Regional Availability	Asia Pacific	
	Europe	

Descriptive Properties	Value	Comments
	Near East/Africa	
	North America	
	South and Central America	
Resin Identification	PBT+ASA-GF20FR(17)	
UL recognition	UL	

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