

Celanese Zytel® 73G30T

Categories: Polymer; Thermoplastic; Nylon (Polyamide PA); Nylon 6 (PA6); Nylon 6, 30% Glass Fiber Filled

Material Notes: 30% Glass Reinforced, Toughened, Polyamide 6

Former DuPont product acquired by Celanese in 2022.

Physical Properties	Metric	English	Comments
Density	1.34 g/cc	0.0484 lb/in ³	DAM; ISO 1183
Melt Density	1.19 g/cc @Temperature 270 °C	0.0430 lb/in ³ @Temperature 518 °F	
Water Absorption	6.2 % @Thickness 2.00 mm	6.2 % @Thickness 0.0787 in	DAM; Sim. to ISO 62
Moisture Absorption	2.00 % @Thickness 2.00 mm	2.00 % @Thickness 0.0787 in	DAM; Sim. to ISO 62
Viscosity Number	150 cm ³ /g	1.50 dl/g	DAM; ISO 307, 1157, 1628

Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	DAM; ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	105 MPa	15200 psi	50% RH; ISO 527-1/-2
	160 MPa	23200 psi	DAM; ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	DAM; ISO 527-1/-2
	7.0 %	7.0 %	50% RH; ISO 527-1/-2
Tensile Modulus	5.70 GPa	827 ksi	50% RH; ISO 527-1/-2
	9.00 GPa	1310 ksi	DAM; ISO 527-1/-2
Flexural Modulus	5.00 GPa	725 ksi	PV; ISO 178
	7.80 GPa	1130 ksi	PV; ISO 178
Poissons Ratio	0.34	0.34	DAM
	0.35	0.35	50% RH
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	50% RH; ISO 180/1A
	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 180/1A
	17.0 kJ/m ² @Temperature 23.0 °C	8.09 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 180/1A
	24.0 kJ/m ² @Temperature 23.0 °C	11.4 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 180/1A

Izod Impact, Unnotched (ISO)	80.0 kJ/m ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 180/1U
	80.0 kJ/m ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 180/1U
Charpy Impact Unnotched	9.00 J/cm ² @Temperature -30.0 °C	42.8 ft-lb/in ² @Temperature -22.0 °F	50% RH; ISO 179/1eU
	10.0 J/cm ² @Temperature -30.0 °C	47.6 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eU
	10.0 J/cm ² @Temperature 23.0 °C	47.6 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 179/1eU
	10.0 J/cm ² @Temperature 23.0 °C	47.6 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	50% RH; ISO 179/1eA
	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eA
	2.00 J/cm ² @Temperature 23.0 °C	9.52 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1eA
	2.50 J/cm ² @Temperature 23.0 °C	11.9 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 179/1eA

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	550 V	550 V	DAM; IEC 60112