

DuPont Zytel® ST801

Super Toughened Polyamide 66

While this product line has been acquired by Celanese, this specific grade had been discontinued while still a DuPont product so it is listed here as a discontinued DuPont product.

Physical Properties	Metric	English	Comments
Density	1.08 g/cc	0.0390 lb/in ³	DAM; ISO 1183
Melt Density	0.920 g/cc @Temperature >=263 °C	0.0332 lb/in ³ @Temperature >=505 °F	
Water Absorption	6.5 % @Thickness 2.00 mm	6.5 % @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	156 cm ³ /g	1.56 dl/g	DAM; ISO 307, 1157, 1628
Linear Mold Shrinkage, Flow	0.018 cm/cm	0.018 in/in	DAM; ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	DAM; ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	43.0 MPa	6240 psi	50% RH; ISO 527-1/-2
	50.0 MPa	7250 psi	DAM; ISO 527-1/-2
Film Elongation at Yield, MD	5.7 %	5.7 %	DAM; ISO 527-3
Elongation at Break	32 %	32 %	DAM; ISO 527-1/-2
	>= 50 %	>= 50 %	50% RH; ISO 527-1/-2
Elongation at Yield	5.7 %	5.7 %	DAM; ISO 527-1/-2
	37 %	37 %	50% RH; ISO 527-1/-2
Tensile Modulus	0.900 GPa	131 ksi	50% RH; ISO 527-1/-2
	2.00 GPa	290 ksi	DAM; ISO 527-1/-2
Poissons Ratio	0.40	0.40	DAM; ISO 527-1/-2
	0.45	0.45	50%RH; ISO 527-1/-2
Izod Impact, Unnotched (ISO)	80.0 kJ/m ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 180/1A
	90.0 kJ/m ² @Temperature 23.0 °C	42.8 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 180/1A
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	50% RH; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	50% RH; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	DAM; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	DAM; ISO 179/1eU
Charpy Impact, Notched	1.70 J/cm ² @Temperature -30.0 °C	8.09 ft-lb/in ² @Temperature -22.0 °F	50% RH; ISO 179/1eA
	1.80 J/cm ² @Temperature -30.0 °C	8.57 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eA
	8.00 J/cm ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1eA
	12.0 J/cm ² @Temperature 23.0 °C	57.1 ft-lb/in ² @Temperature 73.4 °F	50% RH; ISO 179/1eA
Tensile Creep Modulus, 1 hour	800 MPa	116000 psi	50% RH; ISO 899-1
Tensile Creep Modulus, 1000 hours	700 MPa	102000 psi	50% RH; ISO 899-1