

## DuPont Performance Polymers Zytel® FE270038 BK267 Nylon 66 (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Nylon , Nylon 66

### Material Notes:

40% Glass/Mineral Reinforced Polyamide 66 Zytel FE270038 is a 40% glass fiber/mineral reinforced heat stabilized polyamid 66 for injection molding. It is well suited for water injection technology. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Zytel-FE270038-BK267-Nylon-66-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-FE270038-BK267-Nylon-66-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in <sup>3</sup>	
	1.46 g/cc	0.0527 lb/in <sup>3</sup>	DAM; ISO 1183
Water Absorption	5.0 %	5.0 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	1.50 %	1.50 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	69730 cP	69730 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 300 °C	@Shear Rate 5000 1/s, Temperature 572 °F	
	92504 cP	92504 cP	
Viscosity	@Shear Rate 5000 1/s, Temperature 290 °C	@Shear Rate 5000 1/s, Temperature 554 °F	ISO 11403-1 -2
	127400 cP	127400 cP	
	@Shear Rate 5000 1/s, Temperature 280 °C	@Shear Rate 5000 1/s, Temperature 536 °F	
Viscosity	318080 cP	318080 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 300 °C	@Shear Rate 500 1/s, Temperature 572 °F	
	438400 cP	438400 cP	
Viscosity	@Shear Rate 500 1/s, Temperature 290 °C	@Shear Rate 500 1/s, Temperature 554 °F	ISO 11403-1 -2
	615000 cP	615000 cP	
	@Shear Rate 500 1/s, Temperature 280 °C	@Shear Rate 500 1/s, Temperature 536 °F	
Viscosity Test	130 cm <sup>3</sup> /g	130 cm <sup>3</sup> /g	DAM; ISO 307 1157 1628

Linear Mold Shrinkage, Flow Physical Properties	0.0030 cm/cm Metric	0.0030 in/in English	DAM; ISO 294-4 2577 Comments
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	110 MPa	16000 psi	50%RH; ISO 527-1/-2
	145 MPa	21000 psi	DAM; ISO 527-1/-2
Tensile Stress	9.12 MPa	1320 psi	50%RH; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 90.0 °C	@Strain 0.230 %, Temperature 194 °F	
	10.3 MPa	1490 psi	50%RH; ISO 11403-1 -2
	@Strain 0.410 %, Temperature 150 °C	@Strain 0.410 %, Temperature 302 °F	
	11.92 MPa	1729 psi	DAM; ISO 11403-1 -2
	@Strain 0.390 %, Temperature 150 °C	@Strain 0.390 %, Temperature 302 °F	
	13.89 MPa	2015 psi	DAM; ISO 11403-1 -2
	@Strain 0.560 %, Temperature 180 °C	@Strain 0.560 %, Temperature 356 °F	
	17.77 MPa	2577 psi	DAM; ISO 11403-1 -2
	@Strain 0.370 %, Temperature 90.0 °C	@Strain 0.370 %, Temperature 194 °F	
	18.46 MPa	2677 psi	50%RH; ISO 11403-1 -2
	@Strain 0.240 %, Temperature 23.0 °C	@Strain 0.240 %, Temperature 73.4 °F	
	24.88 MPa	3609 psi	50%RH; ISO 11403-1 -2
	@Strain 0.440 %, Temperature 40.0 °C	@Strain 0.440 %, Temperature 104 °F	
	25.55 MPa	3706 psi	50%RH; ISO 11403-1 -2
	@Strain 1.53 %, Temperature 150 °C	@Strain 1.53 %, Temperature 302 °F	
	28.83 MPa	4181 psi	50%RH; ISO 11403-1 -2
	@Strain 0.930 %, Temperature 90.0 °C	@Strain 0.930 %, Temperature 194 °F	
	28.98 MPa	4203 psi	DAM; ISO 11403-1 -2
	@Strain 1.80 %, Temperature 180 °C	@Strain 1.80 %, Temperature 356 °F	
	30.54 MPa	4429 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 1.40 %, Temperature 150 °C	@Strain 1.40 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	33.2 MPa	4820 psi	50%RH; ISO 11403-1 -2
	@Strain 2.68 %, Temperature 150 °C	@Strain 2.68 %, Temperature 302 °F	
	36.61 MPa	5310 psi	DAM; ISO 11403-1 -2
	@Strain 3.06 %, Temperature 180 °C	@Strain 3.06 %, Temperature 356 °F	
	37.55 MPa	5446 psi	50%RH; ISO 11403-1 -2
	@Strain 3.99 %, Temperature 150 °C	@Strain 3.99 %, Temperature 302 °F	
	37.6 MPa	5450 psi	DAM; ISO 11403-1 -2
	@Strain 0.930 %, Temperature 90.0 °C	@Strain 0.930 %, Temperature 194 °F	
	40.07 MPa	5812 psi	DAM; ISO 11403-1 -2
	@Strain 2.35 %, Temperature 150 °C	@Strain 2.35 %, Temperature 302 °F	
	40.99 MPa	5945 psi	50%RH; ISO 11403-1 -2
	@Strain 1.71 %, Temperature 90.0 °C	@Strain 1.71 %, Temperature 194 °F	
	41.45 MPa	6012 psi	DAM; ISO 11403-1 -2
	@Strain 4.41 %, Temperature 180 °C	@Strain 4.41 %, Temperature 356 °F	
	43.89 MPa	6366 psi	50%RH; ISO 11403-1 -2
	@Strain 0.900 %, Temperature 40.0 °C	@Strain 0.900 %, Temperature 104 °F	
	46.09 MPa	6685 psi	50%RH; ISO 11403-1 -2
	@Strain 0.480 %, Temperature 0.000 °C	@Strain 0.480 %, Temperature 32.0 °F	
	46.66 MPa	6767 psi	DAM; ISO 11403-1 -2
	@Strain 3.50 %, Temperature 150 °C	@Strain 3.50 %, Temperature 302 °F	
	48.39 MPa	7018 psi	50%RH; ISO 11403-1 -2
	@Strain 2.71 %, Temperature 90.0 °C	@Strain 2.71 %, Temperature 194 °F	
	51.91 MPa	7529 psi	DAM; ISO 11403-1 -2
	@Strain 1.51 %, Temperature 90.0 °C	@Strain 1.51 %, Temperature 194 °F	

Mechanical Properties	Metric MPa	English	Comments
	@Strain 0.580 %, Temperature -20.0 °C	@Strain 0.580 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	<b>56.38 MPa</b>	<b>8177 psi</b>	
	@Strain 0.620 %, Temperature 0.000 °C	@Strain 0.620 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	<b>59.41 MPa</b>	<b>8617 psi</b>	
	@Strain 1.39 %, Temperature 40.0 °C	@Strain 1.39 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	<b>60.48 MPa</b>	<b>8772 psi</b>	
	@Strain 0.910 %, Temperature 23.0 °C	@Strain 0.910 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	<b>62.79 MPa</b>	<b>9107 psi</b>	
	@Strain 0.710 %, Temperature 40.0 °C	@Strain 0.710 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	<b>63.34 MPa</b>	<b>9187 psi</b>	
	@Strain 2.22 %, Temperature 90.0 °C	@Strain 2.22 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	<b>70.92 MPa</b>	<b>10290 psi</b>	
	@Strain 0.780 %, Temperature 23.0 °C	@Strain 0.780 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	<b>71.24 MPa</b>	<b>10330 psi</b>	
	@Strain 0.760 %, Temperature -20.0 °C	@Strain 0.760 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	<b>71.32 MPa</b>	<b>10340 psi</b>	
	@Strain 1.99 %, Temperature 40.0 °C	@Strain 1.99 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	<b>77.68 MPa</b>	<b>11270 psi</b>	
	@Strain 0.860 %, Temperature 0.000 °C	@Strain 0.860 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	<b>77.99 MPa</b>	<b>11310 psi</b>	
	@Strain 1.30 %, Temperature 23.0 °C	@Strain 1.30 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	<b>83.91 MPa</b>	<b>12170 psi</b>	
	@Strain 1.00 %, Temperature 40.0 °C	@Strain 1.00 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	<b>89.13 MPa</b>	<b>12930 psi</b>	
			50%RH; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 0.960 %, Temperature -20.0 °C	English @Strain 0.960 %, Temperature -4.00 °F	Comments
	93.57 MPa	13570 psi	50%RH; ISO 11403-1 -2
	@Strain 1.79 %, Temperature 23.0 °C	@Strain 1.79 %, Temperature 73.4 °F	
	98.89 MPa	14340 psi	DAM; ISO 11403-1 -2
	@Strain 1.13 %, Temperature 0.000 °C	@Strain 1.13 %, Temperature 32.0 °F	
	102.34 MPa	14843 psi	DAM; ISO 11403-1 -2
	@Strain 1.21 %, Temperature 23.0 °C	@Strain 1.21 %, Temperature 73.4 °F	
	104.57 MPa	15167 psi	DAM; ISO 11403-1 -2
	@Strain 1.35 %, Temperature 40.0 °C	@Strain 1.35 %, Temperature 104 °F	
	105.98 MPa	15371 psi	50%RH; ISO 11403-1 -2
	@Strain 1.31 %, Temperature 0.000 °C	@Strain 1.31 %, Temperature 32.0 °F	
	113.5 MPa	16460 psi	50%RH; ISO 11403-1 -2
	@Strain 1.29 %, Temperature -20.0 °C	@Strain 1.29 %, Temperature -4.00 °F	
	122.88 MPa	17822 psi	DAM; ISO 11403-1 -2
	@Strain 1.79 %, Temperature 40.0 °C	@Strain 1.79 %, Temperature 104 °F	
	123.75 MPa	17948 psi	DAM; ISO 11403-1 -2
	@Strain 1.50 %, Temperature 0.000 °C	@Strain 1.50 %, Temperature 32.0 °F	
	124.19 MPa	18012 psi	DAM; ISO 11403-1 -2
	@Strain 1.59 %, Temperature 23.0 °C	@Strain 1.59 %, Temperature 73.4 °F	
	124.89 MPa	18114 psi	50%RH; ISO 11403-1 -2
	@Strain 1.73 %, Temperature 0.000 °C	@Strain 1.73 %, Temperature 32.0 °F	
	134.88 MPa	19563 psi	DAM; ISO 11403-1 -2
	@Strain 1.58 %, Temperature -20.0 °C	@Strain 1.58 %, Temperature -4.00 °F	
	137.07 MPa	19880 psi	50%RH; ISO 11403-1 -2
	@Strain 1.69 %, Temperature -20.0 °C	@Strain 1.69 %, Temperature -4.00 °F	

Mechanical Properties	142.25 MPa Metric	20632 psi English	Comments
	@Strain 2.05 %, Temperature 23.0 °C	@Strain 2.05 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	146.77 MPa	21287 psi	
	@Strain 1.93 %, Temperature 0.000 °C	@Strain 1.93 %, Temperature 32.0 °F	

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