DuPont Performance Polymers Zytel® MT409AHS BK010 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

Zytel® MT409AHS BK010 is a Medium Toughened, high performance, heat stabilized, black polyamide 66 resin having good stiffness and improved knit line strength with superior toughness and processability.Information provided by DuPont Performance Polymers

Order this product through the following link:
http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-MT409AHS-BK010-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	DAM; ASTM D792
Density	1.11 g/cc	0.0401 lb/in³	DAM; ISO 1183
Water Absorption	0.90 % @Temperature 23.0 °C	0.90 % @Temperature 73.4 °F	Immersion 24h; DAM; ISO 62, Similar to
	1.3 % @Temperature 23.0 °C	1.3 % @Temperature 73.4 °F	Immersion 24h; DAM; ASTM D570
Linear Mold Shrinkage, Flow	0.017 cm/cm @Thickness 2.00 mm	0.017 in/in @Thickness 0.0787 in	DAM; ISO 294-4
Linear Mold Shrinkage, Transverse	0.017 cm/cm @Thickness 2.00 mm	0.017 in/in @Thickness 0.0787 in	DAM; ISO 294-4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	69	69	50%RH; ASTM D785
	113	113	DAM; ASTM D785
Tensile Strength	42.0 MPa @Temperature 23.0 °C	6090 psi @Temperature 73.4 °F	50%RH; ASTM D638
	61.0 MPa @Temperature 23.0 °C	8850 psi @Temperature 73.4 °F	DAM; ASTM D638
Tensile Stress	24.0 MPa @Strain 50.0 %, Temperature 150 °C	3480 psi @Strain 50.0 %, Temperature 302 °F	50%RH; ISO 527
	27.0 MPa @Strain 50.0 %, Temperature 120 °C	3920 psi @Strain 50.0 %, Temperature 248 °F	50%RH; ISO 527

Mechanical Properties	Metric	English	Comments
	27.0 MPa @Strain 50.0 %, Temperature 150 °C	3920 psi @Strain 50.0 %, Temperature 302 °F	DAM; ISO 527
	29.0 MPa @Strain 50.0 %, Temperature 120 °C	4210 psi @Strain 50.0 %, Temperature 248 °F	DAM; ISO 527
	31.0 MPa @Strain 50.0 %, Temperature 100 °C	4500 psi @Strain 50.0 %, Temperature 212 °F	50%RH; ISO 527
	33.0 MPa @Strain 50.0 %, Temperature 80.0 °C	4790 psi @Strain 50.0 %, Temperature 176 °F	50%RH; ISO 527
	33.0 MPa @Strain 50.0 %, Temperature 100 °C	4790 psi @Strain 50.0 %, Temperature 212 °F	DAM; ISO 527
	36.0 MPa @Strain 50.0 %, Temperature 60.0 °C	5220 psi @Strain 50.0 %, Temperature 140 °F	50%RH; ISO 527
	37.0 MPa @Strain 50.0 %, Temperature 80.0 °C	5370 psi @Strain 50.0 %, Temperature 176 °F	DAM; ISO 527
	43.0 MPa @Strain 50.0 %, Temperature 23.0 °C	6240 psi @Strain 50.0 %, Temperature 73.4 °F	50%RH; ISO 527
	43.0 MPa @Strain 50.0 %, Temperature 60.0 °C	6240 psi @Strain 50.0 %, Temperature 140 °F	DAM; ISO 527
	56.0 MPa @Strain 50.0 %, Temperature 0.000 °C	8120 psi @Strain 50.0 %, Temperature 32.0 °F	50%RH; ISO 527
	61.0 MPa @Strain 50.0 %, Temperature 23.0 °C	8850 psi @Strain 50.0 %, Temperature 73.4 °F	DAM; ISO 527
	70.0 MPa @Strain 50.0 %, Temperature 0.000 °C	10200 psi @Strain 50.0 %, Temperature 32.0 °F	DAM; ISO 527
	86.0 MPa	12500 psi	50%RH; ISO 527

Mechanical Properties	Metric	English	Comments
	@Strain 50.0 %, Temperature -40.0 °C	@Strain 50.0 %, Temperature -40.0 °F	
	94.0 MPa @Strain 50.0 %, Temperature -40.0 °C	13600 psi @Strain 50.0 %, Temperature -40.0 °F	DAM; ISO 527
Tensile Strength, Yield	42.0 MPa @Temperature 23.0 °C	6090 psi @Temperature 73.4 °F	50%RH; ISO 527
	60.0 MPa @Temperature 23.0 °C	8700 psi @Temperature 73.4 °F	DAM; ISO 527
Elongation at Break	28 % @Temperature 0.000 °C	28 % @Temperature 32.0 °F	DAM; nominal; ISO 527
	29 % @Temperature 23.0 °C	29 % @Temperature 73.4 °F	DAM; nominal; ISO 527
	35 % @Temperature 23.0 °C	35 % @Temperature 73.4 °F	DAM; ASTM D638
	36 % @Temperature 23.0 °C	36 % @Temperature 73.4 °F	50%RH; ASTM D638
	>= 50 % @Temperature -40.0 °C	>= 50 % @Temperature -40.0 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 0.000 °C	>= 50 % @Temperature 32.0 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 100 °C	>= 50 % @Temperature 212 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 120 °C	>= 50 % @Temperature 248 °F	DAM; nominal; ISO 527
	>= 50 % @Temperature 120 °C	>= 50 % @Temperature 248 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 150 °C	>= 50 % @Temperature 302 °F	DAM; nominal; ISO 527
	>= 50 % @Temperature 150 °C	>= 50 % @Temperature 302 °F	50%RH; nominal; ISO 527
	>= 50 %	>= 50 %	50%RH; nominal; ISO 527

Mechanical Properties	Metric	English	Comments
	>= 50 % @Temperature 60.0 °C	>= 50 % @Temperature 140 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 60.0 °C	>= 50 % @Temperature 140 °F	DAM; nominal; ISO 527
	>= 50 % @Temperature 80.0 °C	>= 50 % @Temperature 176 °F	50%RH; nominal; ISO 527
	>= 50 % @Temperature 80.0 °C	>= 50 % @Temperature 176 °F	DAM; nominal; ISO 527
	>= 50 % @Temperature 100 °C	>= 50 % @Temperature 212 °F	DAM; nominal; ISO 527
Elongation at Yield	6.0 % @Temperature 23.0 °C	6.0 % @Temperature 73.4 °F	DAM; ISO 527
	7.1 % @Temperature 0.000 °C	7.1 % @Temperature 32.0 °F	DAM; ISO 527
	8.7 % @Temperature -40.0 °C	8.7 % @Temperature -40.0 °F	50%RH; ISO 527
	9.7 % @Temperature -40.0 °C	9.7 % @Temperature -40.0 °F	DAM; ISO 527
	22.4 % @Temperature 0.000 °C	22.4 % @Temperature 32.0 °F	50%RH; ISO 527
	27 % @Temperature 23.0 °C	27 % @Temperature 73.4 °F	50%RH; ISO 527
	30.1 % @Temperature 80.0 °C	30.1 % @Temperature 176 °F	50%RH; ISO 527
	31 % @Temperature 60.0 °C	31 % @Temperature 140 °F	50%RH; ISO 527
	45.1 % @Temperature 60.0 °C	45.1 % @Temperature 140 °F	DAM; ISO 527
	>= 50 % @Temperature 80.0 °C	>= 50 % @Temperature 176 °F	DAM; ISO 527

Mechanical Properties	Metric	English	Comments
	@Temperature 100 °C	@Temperature 212 °F	50%RH; ISO 527
	>= 50 % @Temperature 100 °C	>= 50 % @Temperature 212 °F	DAM; ISO 527
	>= 50 % @Temperature 120 °C	>= 50 % @Temperature 248 °F	50%RH; ISO 527
	>= 50 % @Temperature 120 °C	>= 50 % @Temperature 248 °F	DAM; ISO 527
	>= 50 % @Temperature 150 °C	>= 50 % @Temperature 302 °F	DAM; ISO 527
	>= 50 % @Temperature 150 °C	>= 50 % @Temperature 302 °F	50%RH; ISO 527
Tensile Modulus	0.344 GPa @Temperature 150 °C	49.9 ksi @Temperature 302 °F	50%RH; ISO 527
	0.358 GPa @Temperature 150 °C	51.9 ksi @Temperature 302 °F	DAM; ISO 527
	0.443 GPa @Temperature 120 °C	64.3 ksi @Temperature 248 °F	50%RH; ISO 527
	0.476 GPa @Temperature 120 °C	69.0 ksi @Temperature 248 °F	DAM; ISO 527
	0.489 GPa @Temperature 100 °C	70.9 ksi @Temperature 212 °F	50%RH; ISO 527
	0.513 GPa @Temperature 80.0 °C	74.4 ksi @Temperature 176 °F	50%RH; ISO 527
	0.639 GPa @Temperature 60.0 °C	92.7 ksi @Temperature 140 °F	50%RH; ISO 527
	0.640 GPa @Temperature 100 °C	92.8 ksi @Temperature 212 °F	DAM; ISO 527
	0.894 GPa @Temperature 80.0 °C	130 ksi @Temperature 176 °F	DAM; ISO 527
	1.075 GPa	155.9 ksi	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	50%RH; ASTM D638
	1.075 GPa @Temperature 23.0 °C	155.9 ksi @Temperature 73.4 °F	50%RH; ISO 527
	1.777 GPa @Temperature 60.0 °C	257.7 ksi @Temperature 140 °F	DAM; ISO 527
	2.40 GPa @Temperature 23.0 °C	348 ksi @Temperature 73.4 °F	DAM; ISO 527
	2.426 GPa @Temperature 0.000 °C	351.9 ksi @Temperature 32.0 °F	50%RH; ISO 527
	2.443 GPa @Temperature 0.000 °C	354.3 ksi @Temperature 32.0 °F	DAM; ISO 527
	2.70 GPa @Temperature 23.0 °C	392 ksi @Temperature 73.4 °F	DAM; ASTM D638
	2.795 GPa @Temperature -40.0 °C	405.4 ksi @Temperature -40.0 °F	DAM; ISO 527

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