

## DSM Novamid® ST145 NAT PA6-I

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

### Material Notes:

Impact Modified, Injection Molding

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Novamid-ST145-NAT-PA6-I.php](http://www.lookpolymers.com/polymer_DSM-Novamid-ST145-NAT-PA6-I.php)

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in <sup>3</sup>	dry; ISO 1183
Moisture Absorption	1.90 %	1.90 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.018 cm/cm	0.018 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.022 cm/cm	0.022 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	20.0 MPa	2900 psi	cond; ISO 527-1/-2
	30.0 MPa	4350 psi	dry; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	cond; ISO 527-1/-2
	>= 50 %	>= 50 %	dry; ISO 527-1/-2
Elongation at Yield	8.8 %	8.8 %	dry; ISO 527-1/-2
	41 %	41 %	cond; ISO 527-1/-2
Tensile Modulus	0.360 GPa	52.2 ksi	cond; ISO 527-1/-2
	1.00 GPa	145 ksi	dry; ISO 527-1/-2
Flexural Strength	16.0 MPa	2320 psi	cond; ISO 178
	39.0 MPa	5660 psi	dry; ISO 178
Flexural Modulus	0.380 GPa	55.1 ksi	cond; ISO 178
	1.10 GPa	160 ksi	dry; ISO 178
Charpy Impact Unnotched	NB	NB	cond; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10.9 J/cm <sup>2</sup>	51.9 ft-lb/in <sup>2</sup>	

Charpy Impact, Notched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	dry; ISO 179/1eA Comments
	NB	NB	cond; ISO 179/1eA
	@ Temperature 23.0 °C	@ Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 µm/m-°C	55.6 µin/in-°F	dry; ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	dry; ISO 11359-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	62.0 °C	144 °F	dry; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	dry; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	9.00e+14 ohm-cm	9.00e+14 ohm-cm	dry; IEC 60093
Surface Resistance	2.00e+13 ohm	2.00e+13 ohm	cond; IEC 60093
Dielectric Constant	3.0	3.0	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	3.0	3.0	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.010	0.010	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	0.013	0.013	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	dry; IEC 60112

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