

## Murtfeldt Murylon® B Nylon 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Impact Grade

### Material Notes:

Murylon® B natural has the best impact resistance of all Murylon materials. This material is especially suited for use in machine construction thanks to an excellent combination of mechanical properties. Special Properties: • Exceptional resistance • Good impact strength • Low cold flow characteristics • Approved for use in the food industry (EU and FDA) Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Murtfeldt-Murylon-B-Nylon-6.php](http://www.lookpolymers.com/polymer_Murtfeldt-Murylon-B-Nylon-6.php)

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in <sup>3</sup>	ISO 1183-1
Moisture Absorption at Equilibrium	2.6 % @Temperature 23.0 °C	2.6 % @Temperature 73.4 °F	50% RH
Water Absorption at Saturation	9.0 % @Temperature 23.0 °C	9.0 % @Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	dry; ISO 2039-2
Hardness, Shore D	76	76	DIN 53505
Ball Indentation Hardness	150 MPa	21800 psi	dry; ISO 2039-1
Tensile Strength, Yield	45.0 MPa	6530 psi	50% RH; ISO 527-1
	80.0 MPa	11600 psi	dry; ISO 527-1
Elongation at Break	>= 50 %	>= 50 %	dry; ISO 527-1
	>= 100 %	>= 100 %	50% RH; ISO 527-1
Creep Strength	7.00 MPa @Time 3.60e+6 sec	1020 psi @Time 1000 hour	stress leading to 1% elongation; 50% RH; ISO 899-1
	18.0 MPa @Time 3.60e+6 sec	2610 psi @Time 1000 hour	stress leading to 1% elongation; dry; ISO 899-1
Modulus of Elasticity	1.425 GPa	206.7 ksi	50% RH
	3.30 GPa	479 ksi	dry
	24.0 MPa	3480 psi	

Compressive Yield Strength Mechanical Properties	Metric @Strain 1.00 %	English @Strain 1.00 %	dry; ISO 604 Comments
	46.0 MPa @Strain 2.00 %	6670 psi @Strain 2.00 %	dry; ISO 604
	80.0 MPa @Strain 5.00 %	11600 psi @Strain 5.00 %	dry; ISO 604
Charpy Impact Unnotched	NB	NB	dry; ISO 179-1/1eU
	NB	NB	ISO 179
Charpy Impact, Notched	0.550 J/cm <sup>2</sup>	2.62 ft-lb/in <sup>2</sup>	dry; ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.35	0.35	
Sand Slurry	0.23	0.23	µm/km

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 µm/m-°C @Temperature 23.0 - 60.0 °C	50.0 µin/in-°F @Temperature 73.4 - 140 °F	
	105 µm/m-°C @Temperature 23.0 - 100 °C	58.3 µin/in-°F @Temperature 73.4 - 212 °F	
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft <sup>2</sup> -°F	
Melting Point	220 °C	428 °F	ISO 11357-1
Maximum Service Temperature, Air	70.0 °C @Time 7.20e+7 sec	158 °F @Time 20000 hour	
	85.0 °C @Time 1.80e+7 sec	185 °F @Time 5000 hour	
	160 °C @Time <=86400 sec	320 °F @Time <=24.0 hour	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	50.0 °C	122 °F	ISO 11357-1
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments

Electrical Resistivity Electrical Properties	$\geq 1.00\text{e}+12$ ohm-cm Metric	$\geq 1.00\text{e}+12$ ohm-cm English	50% RH; IEC 60093 Comments
	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	dry; IEC 60093
Surface Resistance	$\geq 1.00\text{e}+12$ ohm	$\geq 1.00\text{e}+12$ ohm	50% RH; IEC 60093
	$\geq 1.00\text{e}+13$ ohm	$\geq 1.00\text{e}+13$ ohm	dry; IEC 60093
Dielectric Constant	3.3	3.3	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.8	3.8	50% RH; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.9	3.9	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	7.4	7.4	50% RH; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	50% RH; IEC 60243-1
	25.0 kV/mm	635 kV/in	dry; IEC 60243-1
Dielectric Loss Index	0.019	0.019	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.021	0.021	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.060	0.060	50% RH; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.13	0.13	50% RH; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Compliance Properties	Metric	English	Comments
European Food 1935/2004	Yes	Yes	
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Natural/Black	

## **Contact Songhan Plastic Technology Co.,Ltd.**

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