

Arkema Group Orgalloy® RS 6600 Polyamide 6.6 Alloy

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Unreinforced

Material Notes:

Polyamide Alloy, Rigid grade, Nylon 6.6 based Tubes / Mandrels / Profiles / Cables Information provided by Arkema Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arkema-Group-Orgalloy-RS-6600-Polyamide-66-Alloy.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ISO R1183
Water Absorption	0.70 %	0.70 %	23°C / 24 hrs; ISO 62
Moisture Absorption at Equilibrium	1.2 %	1.2 %	23°C / 50% RH; ISO 62
	2.9 %	2.9 %	in 23°C water; ISO 62
Melt Flow	15 g/10 min @Load 2.16 kg, Temperature 235 °C	15 g/10 min @Load 4.76 lb, Temperature 455 °F	after drying; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	77	77	ISO 868
Tensile Strength, Ultimate	50.0 MPa	7250 psi	ISO R527
Tensile Strength, Yield	51.5 MPa	7470 psi	ISO R527
Elongation at Break	>= 100 %	>= 100 %	ISO R527
Elongation at Yield	4.1 %	4.1 %	ISO R527
Modulus of Elasticity	2.60 GPa	377 ksi	ISO R527
Flexural Strength	67.0 MPa	9720 psi	After conditioning at 23°C and 50% RH; ISO 178
	75.0 MPa	10900 psi	Dry; ISO 178
Flexural Modulus	2.10 GPa	305 ksi	After conditioning at 23°C and 50% RH; ISO 178
	2.30 GPa	334 ksi	Dry; ISO 178
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	After conditioning at 23°C/50%RH; ISO 179/Af
	1.20 J/cm ² @Temperature -20.0 °C	5.71 ft-lb/in ² @Temperature -4.00 °F	Dry; ISO 179/Af

Mechanical Properties	1.30 J/cm ² Metric	6.19 ft-lb/in ² English	After conditioning at 23°C/50%RH; ISO 179/AF
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	1.70 J/cm ²	8.09 ft-lb/in ²	Dry; ISO 179/AF
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1 hour	2270 MPa	329000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C	36.1 µin/in-°F	TMS2 Perkin Elmer
	@Temperature 20.0 - 60.0 °C	@Temperature 68.0 - 140 °F	
CTE, linear, Transverse to Flow	110 µm/m-°C	61.1 µin/in-°F	TMS2 Perkin Elmer
	@Temperature 20.0 - 60.0 °C	@Temperature 68.0 - 140 °F	
Melting Point	255 °C	491 °F	ISO R1218
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	ISO R75
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	ISO R75
Vicat Softening Point	165 °C	329 °F	50 N - B method; ISO 306
	225 °C	437 °F	10 N - A method; ISO 306
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.00e+15 ohm-cm	6.00e+15 ohm-cm	ASTM D257
Surface Resistance	2.50e+16 ohm	2.50e+16 ohm	ASTM D257
Dielectric Strength	36.0 kV/mm	914 kV/in	ASTM D149
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.017	0.017	NFC 26 230
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	0.025	0.025	NFC 26 230
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.032	0.032	NFC 26 230
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Comparative Tracking Index Electrical Properties	≥ 600 V Metric	≥ 600 V English	NFC 26 220 Comments
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