

## Arkema Group Orgalloy® LT 5050 ES Polyamide Alloy

Category : Polymer , Thermoplastic , Nylon

### Material Notes:

Polyamide Alloy, Blow Molding of Technical Parts Information provided by Arkema Group

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Arkema-Group-Orgalloy-LT-5050-ES-Polyamide-Alloy.php](http://www.lookpolymers.com/polymer_Arkema-Group-Orgalloy-LT-5050-ES-Polyamide-Alloy.php)

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in <sup>3</sup>	ISO R1183
Water Absorption	1.35 %	1.35 %	23°C / 24 hrs; ISO 62
Melt Flow	0.50 g/10 min @Load 5.00 kg, Temperature 235 °C	0.50 g/10 min @Load 11.0 lb, Temperature 455 °F	after drying; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	55	55	ISO 868
Tensile Strength, Ultimate	35.0 MPa	5080 psi	ISO R527
Tensile Strength, Yield	23.0 MPa	3340 psi	ISO R527
Elongation at Break	260 %	260 %	ISO R527
Elongation at Yield	3.5 %	3.5 %	ISO R527
Modulus of Elasticity	0.460 GPa	66.7 ksi	ISO R527
Flexural Modulus	0.500 GPa	72.5 ksi	After conditioning at 23°C and 50% RH; ISO 178
	0.800 GPa	116 ksi	Dry; ISO 178
Charpy Impact, Notched	NB @Temperature -20.0 °C	NB @Temperature -4.00 °F	ISO 179/Af
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/Af
Tensile Creep Modulus, 1 hour	420 MPa	60900 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear	170 µm/m-°C @Temperature 20.0 - 60.0 °C	94.4 µin/in-°F @Temperature 68.0 - 140 °F	TMS2 Perkin Elmer

Thermal Properties	Metric 180 µm/m-°C	English 100 µin/in-°F	Comments
CTE, linear, Transverse to Flow	@Temperature 20.0 - 60.0 °C	@Temperature 68.0 - 140 °F	TMS2 Perkin Elmer
Melting Point	220 °C	428 °F	ISO R1218
Vicat Softening Point	198 °C	388 °F	10 N - A method; ISO 306
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.40e+13 ohm-cm	7.40e+13 ohm-cm	ASTM D257
Surface Resistance	3.10e+15 ohm	3.10e+15 ohm	ASTM D257
Dielectric Strength	36.0 kV/mm @Thickness 1.00 mm	914 kV/in @Thickness 0.0394 in	ASTM D149
Dissipation Factor	0.050 @Frequency 100000 Hz	0.050 @Frequency 100000 Hz	NFC 26 230
	0.11 @Frequency 100 Hz	0.11 @Frequency 100 Hz	NFC 26 230
	0.11 @Frequency 1000 Hz	0.11 @Frequency 1000 Hz	NFC 26 230
Comparative Tracking Index	>= 600 V	>= 600 V	NFC 26 220

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