

Arkema Group ORGASOL® 2002 D Nat 1 Polyamide 12, Food Contact Approved

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Information provided by Arkema Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arkema-Group-ORGASOL-2002-D-Nat-1-Polyamide-12-Food-Contact-Approved.php

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Apparent Bulk Density	0.375 g/cc	0.0135 lb/in ³	ISO 1068
Water Absorption	0.43 %	0.43 %	24 hr, 20°C; ISO R 62
	0.75 %	0.75 %	4 days, 20°C; DIN 53 472
	2.97 %	2.97 %	100°C; ATO
Particle Size	18 - 22 µm	18 - 22 µm	Average; ATO 40-41-0 (Coulter Counter)
pH	>= 4.0	>= 4.0	ATO 40-40-0 (pH meter)
Specific Surface Area	1.0 m ² /g	1.0 m ² /g	ATO 40-45-0 (BET)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	79	79	ASTM D2240
Tensile Strength, Ultimate	37.0 MPa	5370 psi	ISO R527
Elongation at Break	228 %	228 %	ISO R527
Flexural Strength	51.0 MPa	7400 psi	ISO R178
Flexural Modulus	1.30 GPa	189 ksi	ISO R178
Charpy Impact Unnotched	NB	NB	ISO R179
	NB	NB	ISO R179
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Charpy Impact, Notched	0.480 J/cm ²	2.28 ft-lb/in ²	ISO R179
	0.440 J/cm ²	2.09 ft-lb/in ²	ISO R179
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Taber Abrasion, mg/1000 Cycles	18.3	18.3	500 g

Thermal Properties	Metric	English	Comments
CTE, linear	156 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	86.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	DIN 53122
	@Temperature -60.0 - 50.0 $^{\circ}\text{C}$	@Temperature -76.0 - 122 $^{\circ}\text{F}$	
	292 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	162 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	DIN 53122
	@Temperature 50.0 - 160 $^{\circ}\text{C}$	@Temperature 122 - 320 $^{\circ}\text{F}$	
Melting Point	177 $^{\circ}\text{C}$	351 $^{\circ}\text{F}$	ISO 3146
Vicat Softening Point	143 $^{\circ}\text{C}$	289 $^{\circ}\text{F}$	ASTM D1525

Processing Properties	Metric	English	Comments
Moisture Content	1.0 %	1.0 %	ISO 1625

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