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Technical Data Sheet

Alcryn ALC - 4680NCNAT

Melt Processable Rubber

Product Description

Alcryn® 4680 NC is a Melt Processable Rubber (MPR) product. It can be processed by blow molding, calendering, compression molding, or extrusion and is available in Asia Pacific, Europe, or North America. Applications of Alcryn® 4680 NC include engineering/industrial parts, hose/tubing, wire & cable, fabrics/fibers and handles.

Processing Method	Blow Molding; Calendering; Compression Molding; Extrusion; Vacuum Forming
Attribute	Fast Molding Cycle; High Heat Resistance; Noise Damping; Oil Resistant; Ozone Resistant; Recyclable Material; Vibration Damping
Forms	Pellets
Appearance	Natural Color
Application	Cable Jacketing; Coating Applications; Fabric Coatings; Flexible Grips; Gaskets; General Purpose; Handles; Hose; Overmolding; Profiles; Seals; Tubing; Weatherstripping; Wire & Cable

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Density	1.27	g/cm³	1.27	g/cm³	ASTM D792
Change in Volume					
(in ASTM #1 Oil, 100 °C, 168 hr)	-10	%	-10	%	ASTM D471
(in Water, 100 °C, 168 hr)	11	%	11	%	ASTM D471
(in Reference Fuel B, 24 °C, 168 hr)	26	%	26	%	ASTM D471
(in ASTM #3 Oil, 100 °C, 168 hr)	26	%	26	%	ASTM D471
Melt Viscosity, (190 °C, 300 sec^-1)			870	Pa·s	ASTM D3835
Mechanical					
Tensile Modulus, (23 °C)	740	psi			ASTM D638
Tensile Strength at Yield, (2 in/min)	1600	psi			ASTM D638
(.0750 in. Compression Molded)					
Tensile Elongation at Break, (23 °C)	360	%	360	%	ASTM D638
(.0750 in. Compression Molded)					
Change in Ultimate Elongation in Air, (121 °C, 168 hr)	350	%	350	%	ASTM D471
Torsion Modulus					
(24 °C, 1.9 mm)	600	psi			ASTM D1043
(-20 °C, 1.9 mm)	10000	psi			ASTM D1043
Tensile Set	12	%	12	%	ASTM D412
Clash-Berg Modulus, (-21 °C)			68.9	MPa	ASTM D1043
Tear Strength			54.3	kN/m	ASTM D624
Hardness					
Shore Hardness, (Shore A, 15 sec)	78		78		ASTM D2240
Change in Shore Hardness in Air, (Shore A, 125 °C, 168 hr)	71		71		ISO 188

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Change in Durometer Hardness in Air, (Shore A, 125 °C, 168 hr)	71		71		ASTM D471
Thermal					
Low Temperature Brittleness			-65	°C	ASTM D746
Additional Information					
Compression Set					
(24 °C, 22 hr, Method B)	25	%	25	%	ASTM D395 B
(100 °C, 22 hr, Method B)	74	%	74	%	ASTM D395 B

Extrusion Parameters	Nominal Value	English Units	Nominal Value	SI Units
Melt Temperature			177	°C