

Alcryn® 4080 BK

Melt Processable Rubber

Advanced Polymer Alloys

Message:

Alcryn® 4080 BK is a Melt Processable Rubber (MPR) material. It is available in Asia Pacific, Europe, or North America for blow molding, calendering, extrusion, or vacuum forming.

Important attributes of Alcryn® 4080 BK are:

RoHS Compliant

Chemical Resistant

Eco-Friendly/Green

Fast Molding Cycle

Good Weather Resistance

Typical applications include:

Coating Applications

Engineering/Industrial Parts

Handles

Hose/Tubing

Wire & Cable

General Information	
Features	Fast Molding Cycle
	General Purpose
	Good Weather Resistance
	High Heat Resistance
	Medium Flow
	Noise Damping
	Oil Resistant
	Ozone Resistant
	Recyclable Material
	Vibration Damping
Uses	Cable Jacketing
	Coating Applications
	Fabric Coatings
	Flexible Grips
	Gaskets
	General Purpose
	Handles
	Hose
	Overmolding
	Profiles
	Seals
	Tubing
	Weatherstripping

Wire & Cable Applications

RoHS Compliance	RoHS Compliant
Appearance	Black
Forms	Pellets
Processing Method	Blow Molding Calendering Extrusion Vacuum Forming

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.27	g/cm ³	ASTM D471, ISO 2781
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 1.90 mm, Compression Molded)	79		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	6.00	mg	ASTM D1044
Torsion Modulus ¹			ASTM D1043
-20°C, 1.90 mm	68.9	MPa	
24°C, 1.90 mm	4.10	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tensile Set ²	12	%	ASTM D412
Tensile Stress			
100% Strain, 1.90 mm ³	5.90	MPa	ASTM D412, ISO 37
100% Strain, 125°C, 1.90 mm ⁴	7.50	MPa	ASTM D573, ISO 188
Tensile Strength			
Yield, 1.90 mm ⁵	10.8	MPa	ASTM D412, ISO 37
Yield, 125°C, 1.90 mm ⁶	11.0	MPa	ASTM D573, ISO 188
Tensile Elongation			
Break, 125°C, 1.90 mm ⁷	380	%	ASTM D573, ISO 188
Break, 1.90 mm ⁸	380	%	ASTM D412, ISO 37
Tear Strength (1.90 mm)	52.5	kN/m	ASTM D624
Compression Set ⁹			ASTM D395B, ISO 815
24°C, 22 hr	24	%	
100°C, 22 hr	75	%	
Clash-Berg Modulus (1°C)	68.9	MPa	ASTM D1043
Aging	Nominal Value	Unit	Test Method
Change in Durometer Hardness in Air ¹⁰ (Shore A, 125°C, 168 hr)	-3.0		ASTM D573, ISO 188
Change in Volume ¹¹			
27°C, 168 hr, in Reference Fuel B	22	%	ASTM D471, ISO 1817
100°C, 168 hr, in ASTM Oil #1	-9.0	%	ASTM D471

100°C, 168 hr, in IRM 903 Oil	24	%	ASTM D471, ISO 1817
100°C, 168 hr, in Water	10	%	ASTM D471, ISO 1817
100°C, 168 hr, in ASTM #1 Oil	-9.0	%	ISO 1817
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-58.0	°C	ASTM D746, ISO 812
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (190°C, 300 sec ⁻¹)	780	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Processing (Melt) Temp	166	°C	
NOTE			

1.	Compression Molded
2.	1.9 mm, Compression Molded
3.	Compression Molded
4.	7 days, Compression Molded
5.	Compression Molded
6.	7 days, Compression Molded
7.	7 days, Compression Molded
8.	Compression Molded
9.	Type I pellets, 12.7 mm diameter, plied up from 1.9 mm slabs
10.	1.9 mm, Compression Molded
11.	1.9 mm, Compression Molded

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