

# Alcryn® 4680 BK

Melt Processable Rubber

Advanced Polymer Alloys

## Message:

Alcryn®4680 BK is a melt processable rubber (MPR) material. This product is available in North America, Europe or Asia Pacific. The processing methods are: blow molding, extrusion, compression molding or injection molding.

Alcryn®The main features of 4680 BK are:

Comply with WEEE standard

ROHS certification

Good UV resistance

good weather resistance

chemical resistance

Typical application areas include:

Wire and cable

engineering/industrial accessories

Hose

sheet

textile/fiber

General Information	
Additive	UV stabilizer
Features	Shock absorption
	Noise reduction
	Good UV resistance
	Medium liquidity
	Ozone resistance
	Good weather resistance
	Heat resistance, high
	Oil resistance
Uses	Handle
	Cable sheath
	Wire sheath
	Washer
	Engineering accessories
	Pipe
	Pipe fittings
	Seals
	Weather-resistant sealing strip
	Sheet
	Fabric
Agency Ratings	EU 2002/96/EC (WEEE)
RoHS Compliance	RoHS compliance

Appearance	Black		
Forms	Particle		
Processing Method	Blow molding		
	Extrusion		
	Compression molding		
	Injection molding		

  

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.27	g/cm <sup>3</sup>	ASTM D792, ISO 1183

  

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 1.91mm, molded)	79		ASTM D2240
IRHD Hardness	79		ISO 48

  

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (1.91mm, molded)	5.93	MPa	ASTM D638, ISO 527-2
Tensile Strength (yield, 1.91mm, molding)	10.8	MPa	ASTM D638, ISO 527-2
Tensile Elongation (fracture, 1.91mm, molded)	380	%	ASTM D638, ISO 527-2
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	6.00	mg	ASTM D1044

  

Elastomers	Nominal Value	Unit	Test Method
Tensile Set	12	%	ASTM D412
Tear Strength <sup>1</sup> (24°C)	52.5	kN/m	ASTM D624
Compression Set			ASTM D395B, ISO 815
24°C, 22 hr	24	%	ASTM D395B, ISO 815
100°C, 22 hr	75	%	ASTM D395B, ISO 815
Clash-Berg Modulus (1°C)	68.9	MPa	ASTM D1043

  

Aging	Nominal Value	Unit	Test Method
Change in Shore Hardness in Air (125°C, 168 hr)	76		ISO 188
Change in Ultimate Elongation (125°C, 168 hr)	380	%	ASTM D471
Change in Durometer Hardness (125°C, 168 hr)	76		ASTM D471
Change in Volume			ASTM D471
24°C, 168 hr, in reference fuel B	22	%	ASTM D471
100°C, 168 hr, ASTM Standard Oil (No.1)	-9.0	%	ASTM D471
100°C, 168 hr, ASTM Standard Oil (No.3)	24	%	ASTM D471
100°C, 168 hr, in water	10	%	ASTM D471

  

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-59.4	°C	ASTM D746, ISO 974

  

Additional Information
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The value listed as Density-Specific Gravity, ASTM D792, was tested in accordance with ASTM D471. Torsion Modulus, ASTM D1043, 75°F: 600psi Aging Tensile Strength, ASTM D573, 7 days, 257°F: 1600psi Torsion Modulus, ASTM D1043, -4°F: 10000psi Aging 100% Modulus, ASTM D573, 7 days, 257 °F: 1100psi Aging Elongation At Break, ASTM D573 and ISO 188: 380% Fluid Resistance 7 Days in water, ISO 1817, at 212 °F: 10% Fluid Resistance 7 Days in ASTM Oil no. 1, ISO 1817, at 212 °F: -9% Fluid Resistance 7 Days in IRM 903 Oil no. 3, ISO 1817, at 212 °F: 24% Fluid Resistance 7 Days in ASTM Ref. Fuel no. B, ISO 1817, at 75 °F: 22% Rheological Viscosity, ASTM D3835, 1/300s at 374°F: 780Pa-s

Injection	Nominal Value	Unit
Processing (Melt) Temp	177	°C

#### NOTE

1. C mould

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