

Technical Data Sheet

Alcryn 4680 BK

Melt Processable Rubber
LyondellBasell Industries
Engineering Plastics

General			
Additive	• UV Stabilizer		
Features	• Good Weather Resistance • High Heat Resistance • Medium Flow	• Noise Damping • Oil Resistant • Ozone Resistant	• UV Resistant • Vibration Damping
Uses	• Cable Jacketing • Engineering Parts • Fabrics • Gaskets	• Handles • Hose • Seals • Sheet	• Tubing • Weatherstripping • Wire Jacketing
Agency Ratings	• EU 2002/96/EC (WEEE)		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Blow Molding • Calendering	• Compression Molding • Extrusion	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.27	1.27 g/cm ³	ASTM D792
--	1.27 g/cm ³	1.27 g/cm ³	ISO 1183

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ASTM D638 ISO 527-1
0.0750 In (1.91 Mm), Compression Molded	860 psi	5.93 MPa	
Tensile Strength			ASTM D638 ISO 527-2
Yield, 0.0750 In (1.91 Mm), Compression Molded	1570 psi	10.8 MPa	
Tensile Elongation			ASTM D638 ISO 527-2
Break, 0.0750 In (1.91 Mm), Compression Molded	380 %	380 %	
Taber Abrasion Resistance			ASTM D1044
1000 Cycles, 1000 G, Cs-17 Wheel	6.00 mg	6.00 mg	

Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Set	12 %	12 %	ASTM D412
Tear Strength ¹ (75°F (24°C))	300 lbf/in	52.5 kN/m	ASTM D624
Compression Set			ASTM D395B ISO 815
75°F (24°C), 22 Hr	24 %	24 %	
212°F (100°C), 22 Hr	75 %	75 %	
Clash-Berg Modulus (34°F (1°C))	10000 psi	68.9 MPa	ASTM D1043

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 0.0750 In (1.91 Mm), Compression Molded	79	79	
IRHD Hardness	79	79	ISO 48

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature	-75.0 °F	-59.4 °C	ASTM D746 ISO 974

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Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Change in Shore Hardness in Air 257°F (125°C), 168 Hr	76	76	ISO 188
Change in Ultimate Elongation 257°F (125°C), 168 Hr	380 %	380 %	ASTM D471
Change in Durometer Hardness 257°F (125°C), 168 Hr	76	76	ASTM D471
Change in Volume 75°F (24°C), 168 Hr, In Reference Fuel B	22 %	22 %	ASTM D471
212°F (100°C), 168 Hr, In Astm #1 Oil	-9.0 %	-9.0 %	
212°F (100°C), 168 Hr, In Astm #3 Oil	24 %	24 %	
212°F (100°C), 168 Hr, In Water	10 %	10 %	

Additional Information

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%

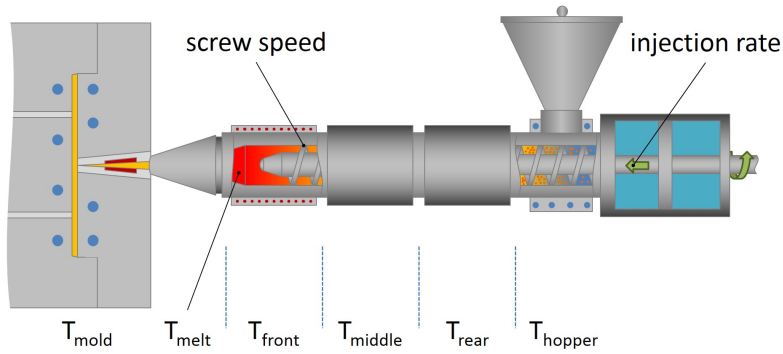
Fluid Resistance 7 Days in ASTM Ref. Fuel no. B, ISO 1817, at 75 °F: 22%

Rheological Viscosity, ASTM D3835, 1/300s at 374°F: 780Pa-s

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Injection	Nominal Value (English)	Nominal Value (SI)
Processing (Melt) Temp	350 °F	177 °C

Notes

¹ Die C

Notes

These are typical property values not to be construed as specification limits.