

AVALON® 65 AC

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

AVALON 65 AC is a polyester based thermoplastic polyurethane for injection moulding.
AVALON 65 AC is part of the AVALON Crystal Range and offers a specially designed transparent material for fashion and sport.
The features offered include:
Transparency
Excellent hydrolysis resistance
Durability
Abrasion resistance

General Information			
Features	Good wear resistance		
	Hydrolysis resistance		
	Durability		
Uses	Sporting goods		
	Footwear		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm ³	ISO 2781
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	65		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Ross Flex ¹ (-10°C)	2.5E+5	Cycles	
Abrasion Resistance		mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
100% strain	2.50	MPa	ISO 37
300% strain	4.00	MPa	ISO 37
Tensile Stress (Break)	20.0	MPa	ISO 37
Tensile Elongation (Break)	700	%	ISO 37
Tear Strength ²	50	kN/m	ISO 34-1
Additional Information			
Test plates conditioned 20 hours at 100°C before testing			
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	80.0 - 90.0	°C	
Drying Time - Desiccant Dryer	2.0	hr	

Hopper Temperature	25.0 - 35.0	°C
Rear Temperature	165 - 185	°C
Middle Temperature	165 - 190	°C
Front Temperature	170 - 195	°C
Nozzle Temperature	170 - 190	°C
Mold Temperature	25.0 - 50.0	°C
Injection Pressure	2.00 - 10.0	MPa
Injection Rate	Slow	
Holding Pressure	1.00 - 5.00	MPa
Back Pressure	0.0300 - 0.300	MPa
Screw Speed	20 - 80	rpm
Screw L/D Ratio	20.0:1.0 to 25.0:1.0	
Screw Compression Ratio	2.0 : 1.0 - 3.0 : 1.0	

Injection instructions

Typical Screw Diameter : 40 - 120 mm3 Stage Design

Feed Zone : 0.4L

Compression Zone : 0.3L

Metering Zone : 0.3L

NOTE

1. BS 5131
2. Method B, right-angle specimen
(without cut)

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