

AVALON® 90 AKU

Thermoplastic Polyurethane Elastomer
Huntsman Corporation

Message:

AVALON 90 AKU is a UV-stabilised, high performance, thermoplastic polyurethane-based material for injection moulding. AVALON 90 AKU is part of the AVALON Crystal Range and offers a specially designed, flexible material with a higher degree of transparency compared with conventional TPU at the same hardness. AVALON Crystal materials are particularly suitable for the sporting goods and fashion markets and are supplied with a high level of stabilisation against premature yellowing from sunlight.

The features offered include:

- UV resistance
- Transparency
- Durability
- phthalate free TPU

General Information			
Additive	UV stabilizer		
Features	Good UV resistance		
	Good flexibility		
	Durability		
Uses	Sporting goods		
	Footwear		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.21	g/cm ³	ISO 2781
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A	90		ISO 868
Shaw D	44		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Ross Flex ¹			
-10°C	> 5.0E+4	Cycles	
23°C	> 5.0E+4	Cycles	
Abrasion Resistance	50.0	mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
100% strain	8.00	MPa	ISO 37
300% strain	16.0	MPa	ISO 37
Tensile Stress (Break)	45.0	MPa	ISO 37
Tensile Elongation (Break)	450	%	ISO 37

Tear Strength ²	110	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	195 - 205	°C	
Middle Temperature	205 - 215	°C	
Front Temperature	210 - 220	°C	
Nozzle Temperature	205 - 215	°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)		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

