

Elastollan® 1180 A 10 FC

Thermoplastic Polyurethane Elastomer (Polyether)

BASF Polyurethanes GmbH

Message:

Thermoplastic Polyether-Polyurethane with outstanding hydrolysis resistance, low temperature flexibility and high resistance to micro-organisms.
General suitability for food contact related applications in FDA and EU regulated markets (please see food contact information)

General Information			
Features	Flexibility at low temperatures		
	Antimicrobial		
	Hydrolysis resistance		
	Compliance of Food Exposure		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.11	g/cm ³	ISO 1183/A
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 3 sec)	80		DIN 7619-1
Mechanical	Nominal Value	Unit	Test Method
Abrasion Loss	30.0	mm ³	ISO 4649-A
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			DIN 53504-S2
20% strain	2.00	MPa	DIN 53504-S2
100% strain	4.50	MPa	DIN 53504-S2
300% strain	8.00	MPa	DIN 53504-S2
Tensile Stress (Yield)	45.0	MPa	DIN 53504-S2
Tensile Elongation			DIN 53504-S2
Fracture ¹	700	%	DIN 53504-S2
Fracture	650	%	DIN 53504-S2
Tear Strength ²	55	kN/m	ISO 34-1
Compression Set			ISO 815
23°C, 72 hr	25	%	ISO 815
70°C, 24 hr	45	%	ISO 815
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1
-30°C	No Break		ISO 179/1
23°C	No Break		ISO 179/1

Injection	Nominal Value	Unit
Drying Temperature	80 - 90	°C
Drying Time	2.0 - 3.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	40	°C
Rear Temperature	200 - 210	°C
Middle Temperature	205 - 220	°C
Front Temperature	210 - 220	°C
Nozzle Temperature	215 - 225	°C
Processing (Melt) Temp	210 - 220	°C
Mold Temperature	20 - 40	°C
Injection Rate	Slow	
Back Pressure	5.00 - 15.0	MPa
Screw L/D Ratio	18.0:1.0 to 22.0:1.0	
Screw Compression Ratio	2.0 : 1.0 - 3.0 : 1.0	

Extrusion	Nominal Value	Unit
Drying Temperature	80 - 90	°C
Drying Time	2.0 - 3.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	150 - 170	°C
Cylinder Zone 2 Temp.	160 - 180	°C
Cylinder Zone 3 Temp.	170 - 190	°C
Cylinder Zone 4 Temp.	180 - 200	°C
Adapter Temperature	185 - 205	°C
Die Temperature	180 - 200	°C

NOTE

1. after storage in water at 80°C for 42 days
2. Method B, right-angle specimen (cut)

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