

apilon 52® 4511

Thermoplastic Polyurethane Elastomer (Polyester)

API SpA

Message:

apilon 52®4511 is a thermoplastic polyurethane elastomer (polyester)(TPU-polyester) product. It can be processed by extrusion or injection molding and is available in Europe. apilon 52®4511 application areas include engineering/industrial accessories, electrical/electronic applications, electrical appliances, tools and home applications.

- Features include:
- environmental protection/green
 - Good processability
 - low temperature resistance
 - chemical resistance
 - Wear-resistant

General Information	
Features	Low density Recyclable materials Workability, good Good wear resistance Low temperature resistance Oil resistance Soft
Uses	Handle Wheels Conveyor belt repair Electrical/Electronic Applications Electrical appliances Washer Power/other tools Pipe fittings Household goods Sporting goods Coating application Footwear
Forms	Particle
Processing Method	Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.02	g/cm³	ASTM D792
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore D, 3 sec)	48		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
--	5.00	MPa	ASTM D638
100% strain	1.00	MPa	ASTM D638
300% strain	2.00	MPa	ASTM D638
Tensile Elongation (Break)	500	%	ASTM D638
Abrasion Resistance	120	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ¹	20.0	kN/m	ASTM D624
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 110	°C	
Drying Time	2.0	hr	
Suggested Max Moisture	0.070	%	
Rear Temperature	180 - 190	°C	
Middle Temperature	185 - 200	°C	
Front Temperature	190 - 215	°C	
Nozzle Temperature	200 - 230	°C	
Mold Temperature	30.0 - 60.0	°C	
Injection Pressure	50.0 - 100	MPa	
Injection Rate	Slow-Moderate		
Injection instructions			
Back Pressure: Medium to LowLocking Pressure: High			
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0 - 110	°C	
Drying Time	2.0	hr	
Suggested Max Moisture	0.070	%	
Cylinder Zone 1 Temp.	160 - 185	°C	
Cylinder Zone 2 Temp.	170 - 200	°C	
Cylinder Zone 3 Temp.	175 - 210	°C	
Cylinder Zone 4 Temp.	180 - 220	°C	
Die Temperature	170 - 210	°C	
Extrusion instructions			
L/D Ratio: 20:1 to 30:1Compression Ratio: 1:2.5 to 1:3			
NOTE			
1.	Without Notch		

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