## apilon 52® 5011

## Thermoplastic Polyurethane Elastomer (Polyester)

API SpA

## Message:

Hardness

apilon 52® 5011 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® 5011 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	1.03	g/cm³	ASTM D792					

Nominal Value

Unit

Test Method

Durometer Hardness (Shore D, 3 sec)	53		ASTM D2240		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Strength			ASTM D638		
	10.0	MPa	ASTM D638		
100% strain	1.60	MPa	ASTM D638		
300% strain	3.00	MPa	ASTM D638		
Tensile Elongation (Break)	600	%	ASTM D638		
Abrasion Resistance	120	mm³	DIN 53516		
Elastomers	Nominal Value	Unit	Test Method		
Tear Strength <sup>1</sup>	27.0	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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