

# apilon 52® D-45L

Thermoplastic Polyurethane Elastomer (Polyester)

API SpA

Message:

apilon 52®D-45L is a thermoplastic polyurethane elastomer (polyester)(TPU-polyester) product. It can be processed by injection molding and is available in Europe. apilon 52®D-45L application areas include engineering/industrial accessories, electrical/electronic applications, electrical appliances, tools and home applications.

- Features include:
- environmental protection/green
  - Good processability
  - Rapid Prototyping Cycle
  - Good UV resistance
  - low temperature resistance

General Information			
Features	Good UV resistance		
	Recyclable materials		
	Workability, good		
	Fast molding cycle		
	Low temperature resistance		
	Hydrolysis resistance		
Uses	Handle		
	Wheels		
	Conveyor belt repair		
	Electrical/Electronic Applications		
	Electrical appliances		
	Washer		
	Power/other tools		
	Pipe fittings		
	Household goods		
	Sporting goods		
	Coating application		
Processing Method	Injection molding		
	Physical	Nominal Value	Unit
	Specific Gravity	1.21	g/cm³
	Hardness	Nominal Value	Unit
	Durometer Hardness		ASTM D2240
	Shaw A, 15 seconds	95	ASTM D2240
	Shaw D, 3 seconds	43	ASTM D2240
	Mechanical	Nominal Value	Unit
			Test Method

Tensile Strength			ASTM D638
--	35.0	MPa	ASTM D638
100% strain	8.00	MPa	ASTM D638
300% strain	14.0	MPa	ASTM D638
Tensile Elongation (Break)	600	%	ASTM D638
Abrasion Resistance	30.0	mm <sup>3</sup>	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>1</sup>	105	kN/m	ASTM D624
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (-20°C)	No Break		ASTM D256
Injection	Nominal Value	Unit	
Drying Temperature	80 - 100	°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 - 60	°C	
Injection Pressure	50.0 - 100	MPa	
Injection Rate	Slow-Moderate		
NOTE			
1.	With Notch		

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#### Recommended distributors for this material

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