

# apilon 52® TCLE 25

Thermoplastic Polyurethane Elastomer (Polyether)

API SpA

Message:

apilon 52®TCLE 25 is a thermoplastic polyurethane elastomer (polyether)(TPU-polyether) product. It can be processed by extrusion or injection molding and is available in Europe. apilon 52®The application areas of TCLE 25 include engineering/industrial accessories, electrical/electronic applications, electrical appliances, tools and home applications.

Features include:

- high liquidity
- environmental protection/green
- low temperature resistance
- chemical resistance
- Wear-resistant

General Information	
Features	Antimicrobial
	Recyclable materials
	Good wear resistance
	High liquidity
	Low temperature resistance
	Hydrolysis resistance
	Oil resistance
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	1.11	g/cm³	ASTM D792
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness		ASTM D2240	
Shaw A, 15 seconds	81	ASTM D2240	
Shaw D, 3 seconds	31	ASTM D2240	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength		ASTM D638	
--	22.0	MPa	ASTM D638
100% strain	3.50	MPa	ASTM D638
300% strain	6.00	MPa	ASTM D638
Tensile Elongation (Break)	600	%	ASTM D638
Abrasion Resistance	50.0	mm <sup>3</sup>	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>1</sup>	55.0	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	80.0 - 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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