

Telcar® TL-4001

Thermoplastic Elastomer

Teknor Apex Company

Message:

Telcar TL-4001 is a general purpose thermoplastic elastomer designed for the industrial market. Telcar TL-4001 is UV stable and is suitable for injection molding and extrusion.

General Information			
Features	Sunlight Resistant		
	smoothness		
	Light stabilization		
	Low liquidity		
	Fill		
	Medium density		
	Medium hardness		
	UV absorption		
Uses	Industrial application		
	Weather-resistant sealing strip		
	General		
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	72		ASTM D2240
Shore A, 5 seconds, injection molding	70		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	2.93	MPa	ASTM D412
Flow: 100% strain ²	5.47	MPa	ASTM D412
Transverse flow: 300% strain ³	3.79	MPa	ASTM D412
Tensile Strength ⁴			ASTM D412
Transverse flow: Fracture	9.69	MPa	ASTM D412

Flow: Fracture	5.96	MPa	ASTM D412
Tensile Elongation ⁵			ASTM D412
Transverse flow: Fracture	1800	%	ASTM D412
Flow: Fracture	230	%	ASTM D412
Tear Strength ⁶			ASTM D624
Transverse flow	43.3	kN/m	ASTM D624
Flow	40.1	kN/m	ASTM D624
Compression Set ⁷			ASTM D395B
23°C, 22 hr	35	%	ASTM D395B
70°C, 22 hr	65	%	ASTM D395B

Injection	Nominal Value	Unit
Rear Temperature	171 - 193	°C
Middle Temperature	177 - 199	°C
Front Temperature	182 - 204	°C
Nozzle Temperature	188 - 210	°C
Processing (Melt) Temp	188 - 210	°C
Mold Temperature	25.0 - 65.6	°C
Injection Pressure	1.38 - 6.89	MPa
Injection Rate	Moderate-Fast	
Back Pressure	0.172 - 0.345	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 25.4	mm

Injection instructions

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	166 - 188	°C
Cylinder Zone 2 Temp.	171 - 193	°C
Cylinder Zone 3 Temp.	177 - 199	°C
Cylinder Zone 5 Temp.	182 - 204	°C
Die Temperature	190 - 210	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

NOTE

1. Mouth die C, 510mm/min
2. Mouth die C, 510mm/min
3. C mold, 510mm/min
4. C mold, 510mm/min
5. Mouth die C, 510mm/min
6. C mold, 510mm/min
7. Type 1

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