

Telcar® TL-3050-88

Thermoplastic Elastomer

Teknor Apex Company

Message:

Telcar TL-3050-88 is a general purpose thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperture range. Telcar TL-3050-88 is a high durometer grade that is RoHS compliant. This grade is UL listed and is suitable for both injection molding and extrusion.

General Information			
Features	High elasticity		
	High tensile strength		
	Good melt strength		
	Good flexibility		
	Good coloring		
	Low liquidity		
	General		
	Halogen-free		
	Extended tensile rate		
	High hardness		
Uses	Electrical components		
	Wire and cable applications		
	Washer		
	Insulating material		
	Connector		
	Moisture-resistant insulating material		
	Weather-resistant sealing strip		
	Fatigue elimination supplies		
	General		
Agency Ratings	UL 1581 2		
RoHS Compliance	RoHS compliance		
UL File Number	QMTT2.E73402		
Appearance	Translucent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.898	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.0	g/10 min	ASTM D1238

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A, 1 sec	91		ASTM D2240
Shaw A, 15 seconds	88		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	280	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
100% strain, 0.508mm ²	6.21	MPa	ASTM D412
300% strain, 0.508mm ³	7.79	MPa	ASTM D412
Tensile Strength (fracture, 0.508mm)	20.5	MPa	ASTM D412
Tensile Elongation (fracture, 0.508mm)	700	%	ASTM D412
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (136°C, 168 hr)	28	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil)	-84	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil)	-75	%	ASTM D471
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-60.0	°C	ASTM D746
RTI Elec	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D257
23°C	6.4E+18	ohms · cm	ASTM D257
50°C	6.8E+15	ohms · cm	ASTM D257
Dielectric Strength	45	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.10		ASTM D150
1 MHz	2.10		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	8.0E-4		ASTM D150
1 MHz	2.8E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, ALL)	HB		UL 94
Oxygen Index	17	%	ASTM D2863
Legal statement			

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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
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		
螺杆转速30 - 100 rpm		
NOTE		
1.	die cut from extruded tapes	
2.	Mouth die C, 510mm/min	
3.	C mold, 510mm/min	

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