

# Telcar® TL-3050-88 RED 4179

Teknor Apex Company - Thermoplastic Elastomer

Thursday, June 29, 2017

## General Information

### Product Description

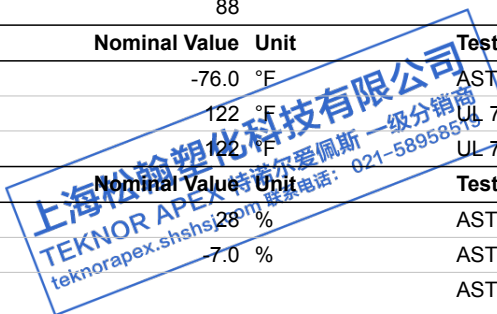
Telcar TL-3050-88 RED is a general purpose thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-3050-88 RED is a high durometer, high tensile strength grade that is RoHS compliant. This grade is UL listed and is suitable for both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

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• General Purpose • Good Colorability • Good Flexibility • Good Melt Strength	• Halogen Free • High Elasticity • High Elongation • High Hardness	• High Tensile Strength • Low Flow
Uses	• Connectors • Electrical Parts • General Purpose	• Grommets • Insulation • Strain Reliefs	• Weatherstripping • Wet Rated Insulation • Wire & Cable Applications
Agency Ratings	• UL 1581 <sup>1</sup>		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMTT2.E73402		
Appearance	• Red		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

## ASTM & ISO Properties<sup>2</sup>

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.900		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	40600	psi	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>3,4</sup> (100% Strain, 0.0200 in)	900	psi	ASTM D412
Tensile Stress <sup>3,4</sup> (300% Strain, 0.0200 in)	1130	psi	ASTM D412
Tensile Strength <sup>3,4</sup> (Break, 0.0200 in)	2980	psi	ASTM D412
Tensile Elongation <sup>3,4</sup> (Break, 0.0200 in)	700	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec	91		
Shore A, 15 sec	88		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-76.0	°F	ASTM D746
RTI Elec	122	°F	UL 746
RTI Str	122	°F	UL 746
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (277°F, 168 hr)	±28	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength 140°F, 168 hr, in IRM 902 Oil	-84	%	ASTM D471



Revision Date: 11/5/2015

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

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Aging	Nominal Value	Unit	Test Method
Change in Ultimate Elongation 140°F, 168 hr, in IRM 902 Oil	-75	%	ASTM D471
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity 73°F	> 1.0E+15	ohms·cm	ASTM D257
122°F	> 1.0E+14	ohms·cm	
Dielectric Strength	1200	V/mil	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.10		
1 MHz	2.10		
Dissipation Factor			ASTM D150
1 kHz	8.0E-4		
1 MHz	2.8E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, ALL)	HB		UL 94
Oxygen Index	17	%	ASTM D2863

### Legal Statement

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### Processing Information

Injection	Nominal Value	Unit
Rear Temperature	340 to 380	°F
Middle Temperature	350 to 390	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	370 to 410	°F
Processing (Melt) Temp	370 to 410	°F
Mold Temperature	77 to 150	°F
Injection Pressure	200 to 1000	psi
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 50.0	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in
Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	330 to 370	°F
Cylinder Zone 2 Temp.	340 to 380	°F
Cylinder Zone 3 Temp.	350 to 390	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	370 to 410	°F
Extrusion Notes		
Screw Speed: 30 to 100 rpm		



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### Notes

- <sup>1</sup> approved for 75C wet location use
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- <sup>2</sup> Typical properties: these are not to be construed as specifications.
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- <sup>3</sup> Die C, 20 in/min
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- <sup>4</sup> die cut from extruded tapes
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