Telcar® TELC 3050

Teknor Apex Company - Thermoplastic Elastomer

Thursday, June 29, 2017

General Information

Product Description

Telcar TELC 3050 is a general purpose thermoplastic elastomer, available in NAT and BLK, designed for industrial and electrical applications requiring flexibility over a wide temperature range. Telcar TELC 3050 is a high durometer 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	• Bondability • Chemical Resistant • Good Adhesion • Good Colorability	• Good Processability • Good Tear Strength • Good Toughness • High Hardness	• Low Density • Low Flow • Low Specific Gravity • Without Fillers
Uses	• Building Wire Insulation • General Purpose • Industrial Applications	• Profiles • Rubber Replacement • Wire & Cable Applications	• Wire Jacketing
Agency Ratings	• UL Unspecified Rating		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	1.5	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus	40000	psi	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
Across Flow : 100% Strain	1180	psi	
Flow : 100% Strain	1460	psi	
Tensile Strength			ASTM D412
Across Flow : Break	1750	psi	
Flow : Break	1700	psi	
Tensile Elongation			ASTM D412
Across Flow : Break	640	%	
Flow : Break	530	%	
Tear Strength - Across Flow [2]	518	lbf/in	ASTM D624
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D, 5 sec)	48		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -76.0	°F	ASTM D746
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air - Across Flow			ISO 188
230°F, 1008 hr	-1.3	%	
257°F, 168 hr	0.60	%	

Revision Date: 6/1/2016

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strain at Break in Air - Across Flow			ISO 188
230°F, 1008 hr	7.6	%	
257°F, 168 hr	9.4	%	
Change in Shore Hardness in Air			ISO 188
Shore D, 230°F, 1008 hr	3.3		

Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1 kHz)	2.10		ASTM D150

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (392°F, 206 sec^-1)	501	Pa·s	ASTM D3835

Legal Statement

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

Injection Notes

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
Drying Temperature	176	°F
Drying Time	2.0	hr
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	374 to 410	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Die C

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