Telcar® TL-81-D965-P

Thermoplastic Elastomer

Teknor Apex Company

Message:

Telcar TL-81-D965-P is a general purpose, halogen-free thermoplastic elastomer designed for electrical applications requiring flexibility over a wide termperture range. Telcar TL-81-D965-P is a high durometer grade that is RoHS compliant and is suitable for both injection molding and extrusion.

General Information	
Features	High elasticity High tensile strength Good melt strength Good coloring Low liquidity General Halogen-free Extended tensile rate
Uses	Electrical/Electronic Applications Electrical components Wire and cable applications Insulating material Military cable insulation material General
RoHS Compliance	RoHS compliance
Appearance	Opacity
Forms	Particle
Processing Method	Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	87		ASTM D2240
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [1]			ASTM D412
100% strain, 0.508mm [2]	5.00	MPa	ASTM D412
300% strain, 0.508mm [3]	6.34	MPa	ASTM D412
Tensile Strength (fracture, 0.508mm)	12.1	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)	5.0	%	ASTM D573
Change in Ultimate Elongation in Air (136°C, 168 hr)	-9.0	%	ASTM D573
Change in Tensile Strength (60°C, 168 hr, in IRM 902 Oil)	-72	%	ASTM D471
Change in Ultimate Elongation (60°C, 168 hr, in IRM 902 Oil)	-55	%	ASTM D471
Thermal	**Nominal Value**	**Unit**	**Test Method**
Continuous Use Temperature	105	°C	ASTM D794
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	3.1E+15	ohms·cm	ASTM D257
50°C	6.6E+13	ohms·cm	ASTM D257
Dielectric Strength	44	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	2.50		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.50 mm, ALL)	HB		UL 94
Oxygen Index	18	%	ASTM D2863
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

Recommended distributors for this material

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