

Telcar® TL 83-F943D-NT

Thermoplastic Elastomer

Teknor Apex Company

Message:

Telcar TL-83-F943D-NT is a high performance thermoplastic elastomer with exceptional organoleptic properties that also provides excellent sealing properties when used in hot-fill cap liner applications. Every ingredient used to formulate this product is either "generally recognized as safe" (GRAS), prior sanctioned, subject to an effective Food Contact Notification (FCN), subject to a Threshold of Regulation (TOR) or identified in one or more sections of Title 21 of the code of Federal Regulations published by the US FDA. Telcar TL-83-F943D-NT is suitable for PP closures.

General Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	Medium liquidity		
	Lubrication		
	Medium hardness		
Uses	Packaging		
	Shield		
	Shell		
Appearance	Translucent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	17	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	74		ASTM D2240
Shore A, 5 seconds, injection molding	72		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ¹	3.06	MPa	ASTM D412
Flow: 100% strain ²	4.05	MPa	ASTM D412
Transverse flow: 300% strain ³	4.13	MPa	ASTM D412
Flow: 300% strain ⁴	5.27	MPa	ASTM D412

Tensile Strength ⁵			ASTM D412
Transverse flow: Fracture	10.7	MPa	ASTM D412
Flow: Fracture	7.65	MPa	ASTM D412
Tensile Elongation ⁶			ASTM D412
Transverse flow: Fracture	720	%	ASTM D412
Flow: Fracture	550	%	ASTM D412
Tear Strength ⁷			ASTM D624
Transverse flow	41.9	kN/m	ASTM D624
Flow	39.2	kN/m	ASTM D624
Compression Set ⁸			ASTM D395B
23°C, 22 hr	35	%	ASTM D395B
70°C, 22 hr	62	%	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.	C mold, 510mm/min		
6.	Mouth die C, 510mm/min		
7.	C mold, 510mm/min		

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