IROGRAN® A 85 E 4993 FCM

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 85 E 4993 FCM is a thermoplastic polyester polyurethane for melt calendering.
IROGRAN is part of the HUNTSMAN technical extrusion and injection molding product range and offers a specially designed, flexible material with a broad processing window.
IROGRAN A 85 E 4993 FCM is a food contact material.
PERFORMANCE FEATURES
High wear resistance
Good melt flow
High elasticity
Complies with FDA CFR 177.2600
Low color
APPLICATIONS
Texile Coatings
Technical molding
Cable jacketing

General Information	
Features	Food Contact Acceptable Good Flexibility Good Flow Good Processability Good Wear Resistance High Elasticity
Uses	Cable Jacketing Coating Applications
Agency Ratings	FDA 21 CFR 177.2600
Forms	Pellets
Processing Method	Calendering Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.21	g/cm³	ASTM D792, DIN 53479
Melt Volume-Flow Rate (MVR) (190°C/10.0 kg)	65.0	cm³/10min	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240, DIN 53505
Shore A, Injection Molded	87		
Shore D, Injection Molded	36		
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Abrasion [2]	20	mm³	DIN 53516
TMA [3]			Internal Method
High : 635.0 µm	160	°C	
Low : 635.0 µm	116	°C	
Calendar Temperature Profile [4]			
Front Roll	160 to 180	°C	
Rear Roll	160 to 180	°C	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [5]			
100% Strain	6.69	MPa	ASTM D412
100% Strain	6.00	MPa	DIN 53504
300% Strain	11.7	MPa	ASTM D412, DIN 53504
Tensile Strength [6]			
Break	28.3	MPa	ASTM D412
Break	36.0	MPa	DIN 53504
Tensile Elongation [7]			
Break	600	%	ASTM D412
Break	630	%	DIN 53504
Tear Strength [8]			
--	99.8	kN/m	ASTM D624
--	65	kN/m	ISO 34-1
Compression Set [9]			ASTM D395, ISO 815
23°C, 24 hr	30	%	
70°C, 24 hr	42	%	
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	85.0 to 90.0	°C	
Drying Time	3.0	hr	
Hopper Temperature	25.0 to 40.0	°C	
Cylinder Zone 1 Temp.	170 to 195	°C	
Cylinder Zone 2 Temp.	170 to 195	°C	
Cylinder Zone 3 Temp.	170 to 195	°C	
Cylinder Zone 4 Temp.	170 to 195	°C	
Cylinder Zone 5 Temp.	170 to 195	°C	
Adapter Temperature	175 to 200	°C	
Die Temperature	175 to 205	°C	
NOTE			
1.	Injection Molded		
2.	Injection Molded		
3.	Extruded Film		
4.	2 Roll Mill		
5.	Injection Molded		
6.	Injection Molded		

7.	Injection Molded
8.	Injection Molded
9.	Injection Molded

Recommended distributors for this material

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