

Ultralast™ MC900

Polyurethane (Polycaprolactone, MDI)

Chemtura

Message:

Ultralast Thermoplastic Urethanes combine our proprietary LF and polymerization technology that provide well-defined molecular structure, better phase segregation and stronger hard segments.

Features of Ultralast MC900 include:

Superior dynamic properties

High cut and tear resistance

Excellent oil resistance

MARKETS

Ultralast Thermoplastic Urethanes can meet the needs of diverse applications requiring performance. MC900 is designed but not limited to the recreational sports and industrial markets.

General Information			
Features	Good Tear Strength		
	Oil Resistant		
Uses	Industrial Applications		
	Sporting Goods		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (210°C/2.16 kg)	15 to 45	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow : 24 hr	1.3	%	
Across Flow : 24 hr	1.2	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	89 to 91		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	28.5	MPa	ASTM D790
Abrasion Resistance - DIN	16.0	mm ³	DIN 53516
Dynamic Properties			
Storage Modulus : 30°C	1.33E+8	dynes/cm ²	
Storage Modulus : 110°C	6.30E+7	dynes/cm ²	
Tangent Delta : 30°C	0.0440		
Tangent Delta : 110°C	0.0530		
Films	Nominal Value	Unit	Test Method
Trouser Tear Resistance	78.3	N/mm	ASTM D1938

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	7.52	MPa	ASTM D412
Tensile Strength	30.8	MPa	ASTM D412
Tensile Elongation (Break)	570	%	ASTM D412
Tear Strength			ASTM D470
Split ¹	28	kN/m	
Split	30	kN/m	
Compression Set (70°C, 22 hr)	28	%	ASTM D395B
Bayshore Resilience	55	%	ASTM D2632
Thermal	Nominal Value	Unit	
Glass Transition Temperature	-34.0	°C	
Injection	Nominal Value	Unit	
Rear Temperature	180 to 210	°C	
Middle Temperature	180 to 210	°C	
Front Temperature	180 to 210	°C	
Nozzle Temperature	180 to 210	°C	
Processing (Melt) Temp	190 to 220	°C	
Mold Temperature	20.0 to 55.0	°C	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	175 to 195	°C	
Cylinder Zone 3 Temp.	175 to 195	°C	
Cylinder Zone 5 Temp.	175 to 195	°C	
Melt Temperature	190 to 220	°C	
Die Temperature	170 to 210	°C	
NOTE			

1.

Oil resistance, IRM #903 oil aged (3 weeks at 100°C)

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