Ultralast™ PE952

Polyurethane (Polyether, PPDI)

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 PE952 include:
High temperature performance
Excellent dynamic properties
High cut and tear resistance
Hydrolytic and chemical resistance
Low processing temperatures
MARKETS
Ultralast Thermoplastic Urethanes can meet the needs of the most demanding applications. PE952 is designed but not limited to the recreational sports, industrial, mining and oil & gas markets.

General Information	
Features	Good Chemical Resistance Good Tear Strength Hydrolytically Stable
Uses	Industrial Applications Mining Applications Oil/Gas Applications Sporting Goods
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	5.0 to 15	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow : 24 hr	2.0	%	
Across Flow : 24 hr	2.0	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A	95 to 97		
Shore D	43 to 45		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus	89.5	MPa	ASTM D790
Abrasion Resistance - DIN	27.0	mm³	DIN 53516
Dynamic Properties			

Storage Modulus : 30°C	4.53E+8	dynes/cm^2	
Storage Modulus : 120°C	2.97E+8	dynes/cm^2	
Tangent Delta : 30°C	0.0250		
Tangent Delta : 120°C	0.0380		
Films	**Nominal Value**	**Unit**	**Test Method**
Trouser Tear Resistance	67.1	N/mm	ASTM D1938
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	12.4	MPa	ASTM D412
Tensile Strength	36.5	MPa	ASTM D412
Tensile Elongation (Break)	660	%	ASTM D412
Tear Strength			
Split [1]	34	kN/m	ASTM D470
Split [2]	35	kN/m	ASTM D470
Split	44	kN/m	ASTM D470
Compression Set (70°C, 22 hr)	35	%	ASTM D395B
Bayshore Resilience	63	%	ASTM D2632
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	-53.0	°C	
Vicat Softening Temperature	166	°C	ASTM D1525
Injection	**Nominal Value**	**Unit**	
Rear Temperature	180 to 200	°C	
Middle Temperature	180 to 200	°C	
Front Temperature	180 to 200	°C	
Nozzle Temperature	180 to 200	°C	
Processing (Melt) Temp	190 to 210	°C	
Mold Temperature	20.0 to 55.0	°C	
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	180 to 200	°C	
Cylinder Zone 3 Temp.	180 to 200	°C	
Cylinder Zone 5 Temp.	180 to 200	°C	
Melt Temperature	195 to 210	°C	
Die Temperature	190 to 210	°C	
NOTE			
1.	Oil resistance, IRM #903 oil aged (3 weeks at 100°C)		
2.	Acid resistance, 5% HCl aqueous solution aged (3 weeks at 85°C)		

Recommended distributors for this material

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