Ultralast™ PR930

Polyurethane (Polycarbonate, 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 PR930 include:
Superior high-temperature performance
Low compression set
Excellent dynamic properties
High cut and tear resistance
Oil and chemical resistance
MARKETS
Ultralast Thermoplastic Urethanes can meet the needs of the most demanding applications. PR930 is designed but not limited to the recreational sports, industrial, mining and oil & gas markets.

General Information	
Features	Good Chemical Resistance Good Tear Strength Low Compression Set Oil Resistant
Uses	Industrial Applications Mining Applications Oil/Gas Applications Sporting Goods
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	50 to 80	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow : 24 hr	1.5	%	
Across Flow : 24 hr	1.4	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	91 to 93		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus	41.4	MPa	ASTM D790
Abrasion Resistance - DIN	26.0	mm³	DIN 53516
Dynamic Properties			
Storage Modulus : 30°C	1.95E+8	dynes/cm²	

Storage Modulus : 140°C	1.49E+8	dynes/cm²	
Tangent Delta : 30°C	0.0520		
Tangent Delta : 140°C	0.0290		
Films	**Nominal Value**	**Unit**	**Test Method**
Trouser Tear Resistance	105	N/mm	ASTM D1938
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	10.2	MPa	ASTM D412
Tensile Strength	40.3	MPa	ASTM D412
Tensile Elongation (Break)	530	%	ASTM D412
Tear Strength			
Split [1]	31	kN/m	ASTM D470
Split [2]	34	kN/m	ASTM D470
Split	35	kN/m	ASTM D470
Split [3]	38	kN/m	ASTM D470
Compression Set (100°C, 70 hr)	36	%	ASTM D395B
Bayshore Resilience	46	%	ASTM D2632
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	-29.0	°C	
Vicat Softening Temperature	165	°C	ASTM D1525
Injection	**Nominal Value**	**Unit**	
Rear Temperature	190 to 220	°C	
Middle Temperature	190 to 220	°C	
Front Temperature	190 to 220	°C	
Nozzle Temperature	190 to 220	°C	
Processing (Melt) Temp	200 to 230	°C	
Mold Temperature	20.0 to 55.0	°C	
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	170 to 210	°C	
Cylinder Zone 3 Temp.	170 to 210	°C	
Cylinder Zone 5 Temp.	170 to 210	°C	
Melt Temperature	200 to 230	°C	
Die Temperature	180 to 220	°C	
NOTE			
1.	Base resistance, 5% NaOH aqueous solution aged (3 weeks at 85°C)		
2.	Hydrolytic resistance, H2O aged (3 weeks at 85°C)		
3.	Oil resistance, IRM #903 oil aged (3 weeks at 135°C)		

Recommended distributors for this material

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