Elastollan® 1175AW

Thermoplastic Polyurethane Elastomer (Polyether)

BASF Corp. Thermoplastic Polyurethanes

Message:

Elastollan® 1175AW is a polyether-based thermoplastic polyurethane (TPU) containing a plasticizer. It contains a non-halogenated flame retardant and is rated UL-94 V-0 in vertical flame test for wall thicknesses of 0.9 mm - 1.1 mm, UL-94 V-2 for wall thicknesses of 1.2 mm and 3.0 mm. It exhibits excellent abrasion resistance, toughness, transparency, very good low temperature flexibility, hydrolytic stability and fungus resistance. It has excellent damping characteristics and outstanding resistance to tear propagation. Elastollan® 1175AW is supplied uncolored in pellet form.

General Information	
Features	Fungus Resistant
	Good Abrasion Resistance
	Good Tear Strength
	Good Toughness
	Hydrolytically Stable
	Low Temperature Flexibility
Appearance	Clear/Transparent
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/10.0 kg)	20 to 50	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	75		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (Injection Molded)	8.96	MPa	ASTM D412
Flexural Modulus (Injection Molded)	10.3	MPa	ASTM D790
Taber Abrasion Resistance	20.0	mg	ASTM D1044
Abrasion - DIN	45	mm³	DIN 53516
Softening Point - DMA	60	°C	Internal Method
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
100% Strain	5.72	MPa	
300% Strain	17.9	MPa	
Tensile Strength	26.2	MPa	ASTM D412
Tensile Elongation (Break)	600	%	ASTM D412
Tear Strength [1]	80.6	kN/m	ASTM D624
Compression Set			ASTM D395B

23°C, 22 hr	20	%	
70°C, 22 hr	45	%	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	-48.0	°C	Internal Method
Vicat Softening Temperature	80.0	°C	ASTM D1525
Flammability	**Nominal Value**		**Test Method**
Flame Rating			UL 94
1.20 mm	V-2		
3.00 mm	V-2		
0.900 mm	V-0		
1.10 mm	V-0		
Injection	**Nominal Value**	**Unit**	
Drying Temperature	100 to 110	°C	
Drying Time	2.0 to 3.0	hr	
Suggested Max Moisture	0.030	%	
Rear Temperature	170 to 210	°C	
Middle Temperature	170 to 210	°C	
Front Temperature	170 to 210	°C	
Nozzle Temperature	200 to 210	°C	
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	100 to 110	°C	
Drying Time	2.0 to 3.0	hr	
Cylinder Zone 1 Temp.	160 to 200	°C	
Cylinder Zone 3 Temp.	160 to 200	°C	
Cylinder Zone 5 Temp.	160 to 200	°C	
Adapter Temperature	175 to 200	°C	
Die Temperature	175 to 205	°C	
NOTE			
1.	Die C		

Recommended distributors for this material

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