

Elastollan® 1185A50X

Thermoplastic Polyurethane Elastomer (Polyether)

BASF Corp. Thermoplastic Polyurethanes

Message:

Elastollan® 1185A is specifically formulated for extruded profile, sheet and film applications. 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® 1185A10 is rated UL-94 HB in vertical flame test for wall thickness of 1.5 mm. Elastollan® 1185A also conforms to the FDA food contact section, book 21, section 177.2600. Elastollan® 1185A also has NSF Standard 61 "Water Contact Material" certification. Elastollan® 1185A is supplied uncolored in diced or pelletized form.

General Information			
Features	Food Contact Acceptable		
	Fungus Resistant		
	Good Abrasion Resistance		
	Good Tear Strength		
	Good Toughness		
	Hydrolytically Stable		
	Low Temperature Flexibility		
Agency Ratings	FDA 21 CFR 177.2600		
	NSF 61		
Appearance	Clear/Transparent		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.12	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/21.6 kg	40 to 60	g/10 min	
190°C/8.7 kg	10 to 20	g/10 min	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	85		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	20.7	MPa	ASTM D412
Flexural Modulus (Injection Molded)	29.0	MPa	ASTM D790
Taber Abrasion Resistance	30.0	mg	ASTM D1044
Abrasion - DIN	25	mm ³	DIN 53516
Softening Point - DMA	66	°C	Internal Method
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412

100% Strain	9.65	MPa	
300% Strain	21.4	MPa	
Tensile Strength	35.9	MPa	ASTM D412
Tensile Elongation (Break)	530	%	ASTM D412
Tear Strength ¹	110	kN/m	ASTM D624
Compression Set			ASTM D395B
23°C, 22 hr	25	%	
70°C, 22 hr	45	%	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-38.0	°C	Internal Method
Vicat Softening Temperature	100	°C	ASTM D1525
Flammability	Nominal Value		Test Method
Flame Rating (1.50 mm)	HB		UL 94
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	190 to 220	°C	
Middle Temperature	190 to 220	°C	
Front Temperature	190 to 220	°C	
Nozzle Temperature	210 to 225	°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		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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