

Elastollan® 1185A10V (Film)

Technical Bulletin

Polyether Type

Elastollan® 1185A10V (Film) is a polyether-based thermoplastic polyurethane (TPU) with an MFI value of 21-40 (at 190°C/21.6 kg). It is specifically formulated for sheet and film applications. It exhibits excellent abrasion resistance, toughness, transparency, low temperature properties, hydrolytic stability and fungus resistance. Elastollan® 1185A10V (Film) also conforms to the FDA food contact section, book 21, section 177.2600. As with all TPU products, Elastollan® 1185A10V (Film) must be dried before processing. The drying step is required to maintain a low moisture content until the product enters the processing equipment. The water content must be less than 0.03% before and during processing. The typical drying conditions should be 2-4 hours @ 175°-195°F (80°-90°C). Elastollan® 1185A10V (Film) can be stored for up to 1 year in its original container. Containers should be stored in a cool and dry area.

Properties		Test Method	Typical Value	
			English	SI
Physical				
Specific Gravity	gr./cm ³	ASTM D-792	1.12	1.12
Hardness	Shore A	ASTM D-2240	86A	86A
MFI, g/10 min	190°C/21,6 kg	ASTM D-1238	20 – 40	20 - 40
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	7500 psi	52 MPa
Tensile Stress	@100% Elong.	ASTM D-412	1100 psi	8 MPa
Tensile Stress	@300% Elong.	ASTM D-412	2700 psi	19 MPa
Elongation at Break	%	ASTM D-412	570%	570%
Tensile Set	@200% Elong.	ASTM D-412	45%	45%
Compression Set, %	22 hrs @ 23°C	ASTM D-395 (B)	25%	25%
Compression Set, %	22 hrs @ 70°C	ASTM D-395 (B)	45%	45%
Flexural Modulus	psi / MPa	ASTM D-790	6250 psi	43 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	500 lb./in.	88 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	25 mg	25 mg
Thermal				
Vicat Softening Point	°F/°C	ASTM D-1525	212°F	100°C
Glass Transition Temperature	°F/°C	DSC	-40°F	-40°C
Processing Conditions, Extrusion	°F/°C		360 - 400 °F	180 - 205°C

The above values are shown as typical values and should not be used as specifications.
Molded plaques 0.080" thick were cured 20 hours at 100 °C before testing

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