

Elastollan® 1185A10

Technical Bulletin

Polyether Type

Elastollan® 1185A10 is a polyether-based thermoplastic polyurethane (TPU) with an MFI value of <20 (at 190°C/21.6 kg). It is specifically formulated for extruded profile, sheet and film applications. It exhibits excellent abrasion resistance, toughness, transparency, low temperature properties, hydrolytic stability and fungus resistance. Elastollan® 1185A10 is also conforming to the FDA food contact section, book 21, section 177.2600. As with all TPU products, Elastollan® 1185A10 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® 1185A10 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
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	4800 psi	33 MPa
Tensile Stress	@100% Elong.	ASTM D-412	1100 psi	7.6 MPa
Tensile Stress	@300% Elong.	ASTM D-412	1750 psi	12 MPa
Elongation at Break	%	ASTM D-412	640%	640%
Tensile Set at Break	%	ASTM D-412	70%	70%
Compression Set, %	22 hrs @ 23°C	ASTM D-395 (B)	25%	25%
Compression Set, %	22 hrs @ 70°C	ASTM D-395 (B)	45%	45%
E-Modulus	psi / MPa	ASTM D-412	3000 psi	20.7 MPa
Flex Modulus	psi / MPa	ASTM D-790	4500 psi	31 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	600 lb./in.	105 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	30 mg	30 mg
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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