

Elastollan® 1190A10

Technical Bulletin

Polyether Type

Elastollan® 1190A10 is a polyether-based thermoplastic polyurethane (TPU). 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® 1190A10 is also conforming to the FDA food contact section, book 21, section 177.2600. As with all TPU products, Elastollan® 1190A10 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® 1190A10 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	1.13	1.13
Hardness	Shore A	ASTM D-2240	91A	91A
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	5300 psi	37 MPa
Tensile Stress	@100% Elong.	ASTM D-412	1500 psi	10 MPa
Tensile Stress	@300% Elong.	ASTM D-412	2500 psi	17 MPa
Elongation at Break	%	ASTM D-412	575%	575%
Tensile Set at Break	%	ASTM D-412	75%	75%
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	4500 psi	31 MPa
Flexural Modulus	psi / MPa	ASTM D-790	6500 psi	44.8 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	715 lb./in.	125 N/mm
Taber Abrasion Resistance / mg	1000 gr./H-18	ASTM D-1044	45 mg	45 mg
Processing Conditions, Extrusion	°F/°C		370 - 405° F	190 - 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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