

Elastollan® 1180A50

Technical Bulletin

Polyether Type

Elastollan® 1180A50 is a polyether-based thermoplastic polyurethane (TPU) It exhibits excellent abrasion resistance, toughness, transparency, low temperature properties, hydrolytic stability and fungus resistance. Elastollan® 1180A50 is also conforming to the FDA food contact section, book 21, section 177.2600. As with all TPU products, Elastollan® 1180A50 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® 1180A50 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	1.11	1.11
Hardness	Shore A	ASTM D-2240	80A	80A
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	4700 psi	32 MPa
Tensile Stress	@100% Elong.	ASTM D-412	800 psi	5.5 MPa
Tensile Stress	@300% Elong.	ASTM D-412	1500 psi	10 MPa
Elongation at Break	%	ASTM D-412	600%	600%
Tensile Set at Break	%	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%
E-Modulus	psi / MPa	ASTM D-412	1700 psi	11.7 MPa
Flexural Modulus	psi / MPa	ASTM D-790	2800 psi	19.3 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	515 lb./in.	90 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	25 mg	25 mg
Processing Conditions, Inj. Molding	°F/°C		380 -390° F	190 - 200° 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*

BASF

