Elastollan® 1164D50

Technical Bulletin

Polyether Type

Elastollan® 1164D50 is a polyether-based thermoplastic polyurethane (TPU). It exhibits excellent abrasion resistance, toughness, transparency, low temperature properties, hydrolytic stability and fungus resistance. Elastollan® 1164D50 is also conforming to the FDA food contact section, book 21, section 177.2600. As with all TPU products, Elastollan® 1164D50 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 @ 195º-220º F (90º-105ºC). Elastollan® 1164D50 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	1.18	1.18
Hardness	Shore D	ASTM D-2240	64D	64D
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	6000 psi	41 MPa
Tensile Stress	@100% Elong.	ASTM D-412	3600 psi	25 MPa
Tensile Stress	@300% Elong.	ASTM D-412	4800 psi	33 MPa
Elongation at Break	%	ASTM D-412	425%	425%
Tensile Set at Break	%	ASTM D-412	90%	90%
Compression Set, %	22 hrs @ 23ºC	ASTM D-395 (B)	40%	40%
Compression Set, %	22 hrs @ 70ºC	ASTM D-395 (B)	50%	50%
E-Modulus	psi / MPa	ASTM D-412	28000 psi	193 MPa
Flexural Modulus	psi / MPa	ASTM D-790	36000 psi	248.3 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die	1250 lb./in.	220 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	55 mg	55 mg
Processing Conditions, Inj. Molding	°F/°C		410 - 440°F	210 - 225°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 ºC before testing

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