

Elastollan® C59D53

Technical Bulletin

Polyester Type

Elastollan® C59D53 is a polyester-based thermoplastic polyurethane (TPU). It exhibits excellent abrasion resistance and toughness, good hydrolytic stability, good heat, oil, fuel, and solvent resistance. As with all TPU products, Elastollan® C59D53 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 @ 195°-220°F (90°-105°C). Elastollan® C59D53 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./cm³	ASTM D-792	1.23	1.23
Hardness	Shore D	ASTM D-2240	56D	56D
Mechanical				
Tensile Strength (Ultimate)	psi/MPa	ASTM D-412	7600 psi	52 MPa
Tensile Stress	@100%	ASTM D-412	2400 psi	17 MPa
Tensile Stress	@300%	ASTM D-412	3700 psi	26 MPa
Elongation at Break	%	ASTM D-412	480%	480%
Tensile Set at Break	%	ASTM D-412	90%	90%
Compression Set, %	22 hrs @	ASTM D395 (B)	30%	30%
Compression Set, %	22 hrs @	ASTM D395 (B)	50%	50%
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	1100 lb./in.	190 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	45 mg	45 mg
Processing Conditions, Extrusion	°F/°C		410 - 435°F	205 - 225°C
Processing Conditions, Inj. Molding	°F/°C		410 - 435°F	205 - 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 °C before testing*

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