

Elastollan® S60D53N

Technical Bulletin

Polyester Type

Elastollan® S60D53N is a polyester-based thermoplastic polyurethane (TPU). It exhibits excellent abrasion resistance and toughness, good heat, oil, fuel, and solvent resistance. As with all TPU products, Elastollan® S60D53N 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® S60D53N 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	1.25	1.25
Hardness	Shore D	ASTM D-2240	60D	60D
Mechanical				
Tensile Strength (Ultimate)	psi/MPa	ASTM D-412	6200 psi	42.8 MPa
Tensile Stress	@100% Elong	ASTM D-412	3200 psi	22.1 MPa
Tensile Stress	@300% Elong	ASTM D-412	5300 psi	36.6 MPa
Elongation at Break	%	ASTM D-412	450%	450%
Tensile Set at Break	%	ASTM D-412	110%	110%
Compression Set, %	22 hrs@ 23°C	ASTM D-395 (B)	40%	40%
Compression Set, %	22 hrs@ 70°C	ASTM D-395 (B)	50%	50%
Tear Strength	lb./in. N/mm	ASTM D-624, Die C	1150 lb./in.	202 N/mm
Taber Abrasion Resistance / mg loss	1000 gr./H-18	ASTM D-1044	50 mg	50 mg
Thermal				
Vicat Softening Point	°F/°C	ASTM D-1525	295°F	145°C
Glass Transition Temperature	°F/°C	DSC	30°F	0°C
Processing Conditions, Inj. Molding	°F/°C		400 - 440°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

Caution: Contact with product dusts from regrinding operations may cause temporary irritation of the eyes and the respiratory tract. Use with local exhaust. Under hot melt processing conditions (170-230°C), wear personal protective equipment to prevent thermal burns.
First aid: *Eyes*-Flush eyes with flowing water at least 15 minutes. If irritation develops, consult a physician. *Skin*-Skin contact with hot melt may cause thermal burns. Call a physician immediately. *Inhalation*-If vapors generated from the hot melt process are inhaled, move to fresh air. Aid in breathing. If breathing difficulties develop, see a physician immediately.
In case of fire: Use water fog, foam, CO₂, or dry chemical extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turnout gear.
Disposal: Waste material, unused contents and empty containers must be disposed of in accordance with applicable local, state or federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.
In case of chemical emergency: Call CHEMTREC day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents. 800-424-9300
Attention: This product is sold solely for use by industrial institutions. Refer to our Material Safety Data Sheet regarding safety, usage, applications, hazards, procedures and disposal of this product. Consult your supervisor for additional information.

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

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