

## TECARAN ABS

Ensinger TECARAN™ ABS is a terpolymer and an amorphous resin. It is manufactured by combining three different compounds. The three that make up TECARAN™ ABS are acrylonitrile, butadiene, and styrene. TECARAN™ ABS occupies the unique position of being a bridge between the commodity and other higher performance engineering thermoplastics. Its performance is characterized by toughness and impact strength even at low temperatures, good stiffness and machinability.



- **Cost Effective**
- **Good Toughness At Low Temperatures**
- **Easily Machinable**
- **Available In Natural or Black**
- **ASTM D 4673 ABS0220B43630**
- **Easily Bonded**

*The applications for TECARAN™ ABS range from Aerospace and automotive parts and housings, to parts for agricultural lawn and garden equipment and components for medical and business equipment, as well as many others.*

see properties on page 2

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	Properties	Condition	Value		Test Method	Comment
<b>Mechanical</b>	Modulus of elasticity (tensile test)	@ 73°F	270,000	°F	ASTM D 638	
	Wear (K) factor	Against Steel, 40psi,50fpm	3500*10 <sup>-10</sup>	in <sup>3</sup> -min/ft-lbs-hr	ASTM D 3702 1)	1) Injection molded data
	Tensile strength at yield	@ 73°F	5,100	psi	ASTM D 638	
	Elongation at break	@ 73°F	15	%	ASTM D 638	
	Flexural strength	@ 73°F	8,000	psi	ASTM D 790	
	Modulus of elasticity (flexural test)	@ 73°F	270,000	psi	ASTM D 790	
	Impact strength (Izod)	@ 73°F	6.3	ft-lbs/in	ASTM D 256	
	Rockwell hardness	@ 73°F R Scale	102		ASTM D 785	
	Coefficient of friction	Static	0.19 - 0.21		ASTM D 3702 1)	
	Coefficient of friction	Dynamic, 40 psi, 50 fpm	0.35		ASTM D 3702 1)	
<b>Thermal</b>	Vicat softening point		224	°F	1)	
	Deflection temperature	@ 66 psi	200	°F	ASTM D 648 1)	
	Deflection temperature	@ 264 psi	177	°F	ASTM D 648 1)	
	Service temperature	Intermittent	210	°F	-	
	Service temperature	Long Term	150	°F	2)	2) per UL746B
	Thermal expansion (CLTE)	-40F to 100F	5.6*10 <sup>-5</sup>	in/in/°F	ASTM D 696 1)	
	Specific heat		0.30	BTU/lb-F°	3)	3) per ASTM C351, Injection molded data
	Thermal conductivity		1.32	BTU-in/hr-ft <sup>2</sup> -F°	ASTM C 696	
<b>Electrical</b>	Volume resistivity		1.0*10 <sup>15</sup>	Ω*cm	ASTM D 257 1)	
	Dielectric strength		450	V/mil	ASTM D 149 1)	
	Dissipation factor	@ 60 Hz, 73°F	0.02		ASTM D 150 1)	
	Dielectric constant	@ 60 Hz, 73°F, 50% RH	3.3		ASTM D 150 1)	
<b>Other</b>	Moisture absorption	@ 24 hours, 73°F	0.30	%	ASTM D 570	
	Moisture absorption	@ saturation, 73°F	0.70	%	ASTM D 570	
	Flammability (UL94)		HB		4)	4) Injection molded data (1.5mm thick)

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TECARAN™- Ensinger Industries, Inc.