PROTOLABS
Manufacturing. Accelerated.

ABS

ABS is a low-cost engineering plastic that is easy to machine. ABS is an ideal material for structural applications when impact resistance, strength, and stiffness are required. It is widely used for pre-production prototypes since it has excellent dimensional stability and is easy to paint and glue.

Applications

ABS is commonly used in prototypes and short-run parts as well as medical devices, computer/electronic applications, products in the automotive industry, and consumer product parts.

Key Product Benefits

- Impact Stability
- Strength and Stiffness
- Cost Effective
- Dimensional Stability
- Chemical and Heat Resistance
- Machinability

Properties

Property	Test Method	Value
Density	ASTM D1505/D792	1.03 g/cm3
Water Absorption @ 24 hours	ASTM D570	0.3%
Rockwell Hardness (R Scale)	ASTM D785	102-105
Tensile Strength @ Yield	ASTM D638	>5,600 psi
Elongation @ Break	ASTM D638	25-40%
Tensile Modulus	ASTM D638	301,000-340,000 psi
Flexural Modulus	ASTM D790	300,000-313,000 psi
Flexural Strength	ASTM D790	10,700-11,000 psi
Izod Impact, Notched	ASTM D256	7.7-8.0 ft-lb/in
Flammability	UL 94	HB
Dielectric Strength	ASTM D149	450 V/mil
Dielectric Constant @ 1 MHz	ASTM D150	3.2

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