

EX - Specifications

Description

This material has excellent toughness and is very easy to process. It has excellent impact resistance and repeatable mechanical properties. Parts produced with this material have the toughness of injection molded ABS and polypropylene and functional prototypes can be tested in “real-life” environments.

Thermal Properties*

Heat deflection temperature ASTM D-648 @66 psi	370°F
Coefficient of thermal expansion ASTM E-381 @0-50°C	66.7x10 ⁻⁶ /°F
Specific heat capacity ASTM E-1269	0.418 BTU/lb.-°F
Thermal conductivity ASTM E-1225	3.5 BTU-in./hr-ft.2-°F
Flammability UL 94	HB

Electrical Properties*

Volume resistivity ASTM D-257	1.3 x 10 ¹³ ohm-cm
Surface resistivity ASTM D-257	4.9 x 10 ¹² ohm
Dissipation factor, 1KHz ASTM D-150	0.050
Dielectric constant, 1KHz ASTM D-150	4.5
Dielectric strength ASTM D-149	470 kV/in.

General Properties*

Appearance	White
Specific gravity ASTM D-792	1.01 g/cm ³
Moisture absorption, 24 hours ASTM D-570	0.48%

*Data was generated by building parts under typical default parameters. EX was processed on a base-level Sinterstation HiQ™ SLS® system at 13 watts laser power, 200 inches/sec [5 m/sec] scan speed, and a powder layer thickness of 0.004 inches [0.1 mm].

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Applications

- Thin-wall ductwork for Aerospace, Motorsports and Unmanned air vehicles (UAV's)
- Snap-fit parts
- Vehicle dashboard and grilles
- Housings, enclosures, impellers and connectors
- Consumer sporting goods
- Snap-fit parts
- Living hinges
- Bumpers

Mechanical Properties*

Hardness ASTM D-2240	74 Shore D
Flexural modulus ASTM D-790	190 ksi
Flexural strength, Ultimate ASTM D-790	6,672 psi
Tensile modulus ASTM D-638	220 ksi
Tensile strength, Ultimate ASTM D-638	6,961 psi
Elongation at break ASTM D-638	47%
Impact strength, Notched Izod ASTM D-256	1.4 ft.- lb./in.
Impact strength, Unnotched Izod ASTM D-256	27.8 ft.- lb./in.
Gardner Impact ASTM D-5420	8.7 ft.- lb.

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