

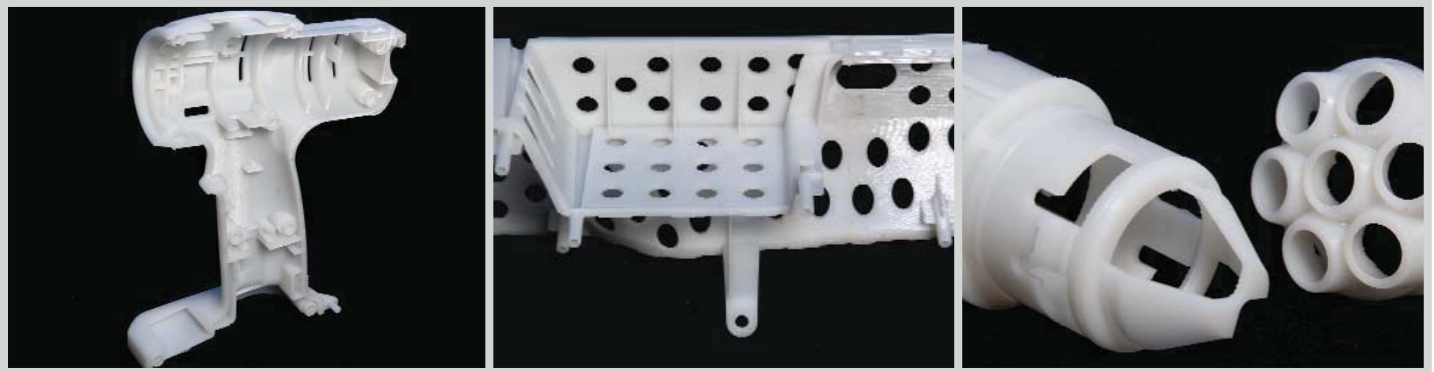
Services Provided By

PROTO3000
3D Engineering Solutions

Accura[®] 55 plastic

for use with solid-state stereolithography (SLA[®]) systems

Simulate the look and feel of molded ABS with this tough and versatile plastic.



APPLICATIONS

- Automotive interior components
- Short-run production parts
- Electronic components
- Testing of functional assemblies
- Rigid and durable functional prototypes
- Concept and marketing models
- Accurate, durable master patterns for urethane casting

FEATURES

- Durable and rigid material
- Look and feel of molded ABS
- High accuracy with less distortion
- High production speed
- Low viscosity formulation
- Fully developed and tested build styles

BENEFITS

- Produce ABS-like parts without molding or machining
- Increase market opportunities and acceptance for models
- Parts produced within tolerance and faithful to CAD data
- Increase system throughput
- Minimize part cleaning and finishing labor
- Maximize reliability with no user R&D

Accura® 55 plastic

For use with solid-state stereolithography (SLA®) systems

“At Boston Scientific, we test several thousand designs each year. The speed of Accura® 55 has allowed us to produce more models in a shorter time. This greatly increases the number of designs we can test and improves our time to market. In addition, our engineers are amazed that they cannot distinguish the Accura® 55 prototypes from machined ABS and acetal articles.”

– Joseph Cihlar - Rapid Prototyping Team Lead, Boston Scientific

TECHNICAL DATA

Liquid Material

MEASUREMENT	CONDITION	VALUE
Appearance		White
Liquid Density	@ 25 °C (77 °F)	1.13 g/cm ³
Solid Density	@ 25 °C (77 °F)	1.20 g/cm ³
Viscosity	@ 30 °C (86 °F)	155 - 185 cps
Penetration Depth (Dp) *		5.2 mils
Critical Exposure (Ec) *		7.4 mJ/cm ²
Tested Build Styles		EXACT™, FAST™, EXACT-HR

Post-Cured Material

MEASUREMENT	CONDITION	METRIC	US
Tensile Strength	ASTM D 638	63 - 68 MPa	9200 - 9850 PSI
Tensile Modulus	ASTM D 638	3200 MPa - 3380 MPa	460 - 490 KSI
Elongation at Break (%)	ASTM D 638	5 - 8 %	5 - 8 %
Flexural Strength	ASTM D 790	88 - 110 MPa	12830 - 15920 PSI
Flexural Modulus	ASTM D 790	2690 - 3240 MPa	390 - 470 KSI
Impact Strength (Notched Izod)	ASTM D 256	12 - 22 J/m	0.2 - 0.4 ft-lb/in
Impact Resistance (Gardner)	ASTM D5420	1.1 J	0.81 ft-lbs
Heat Deflection Temperature	ASTM D 648 @ 66 PSI @ 264 PSI	55 - 58 °C 51 - 53 °C	131 - 136 °F 123 - 127 °F
Hardness, Shore D		85	85
Co-efficient of Thermal Expansion	ASTM E 831-93 TMA (T<T _g , 0 - 40 °C) TMA (T<T _g , 75 - 140 °C)	61 μm/m-°C 163 μm/m-°C	141 μin/in-°F 326 μin/in-°F
Glass Transition (T _g)	DMA, E''	56 °C	132 °F

* Dp/Ec values are the same on all solid-state laser SLA® systems.

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PN 70484 Issue Date - 06 Sep 07

