STEREOLITHOGRAPHY

Accura® 60 Plastic

The high clarity of Accura® 60 Plastic allows for the easy study of fluid flow and the ability to visualize internal features and structures.

Simulate the properties and appearance of polycarbonate with this clear, tough plastic.

Applications

- Tough functional prototypes
- Automotive design components
- Consumer electronics (cell phones etc.)
- Medical instruments, devices and labware
- Lighting components (lenses etc.)
- Fluid flow and visualization models
- Master patterns for urethane castings
- QuickCast™ patterns for invest ment casting
- Transparent assemblies
- Clear display models
- Concept and marketing models

Features

- Durable and stiff
- High clarity
- Fast build speed
- Low viscosity formulation
- Fully developed and tested build styles

Benefits

- Achieve the look and feel of polycarbonate
- View internal features and passages
- Increase system throughput
- Minimize part cleaning and finishing
- Maximize reliability with no user R&D

STEREOLITHOGRAPHY

Accura® 60 Plastic

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

"Accura® 60 has such amazing clarity. Our automotive customers consistently choose it for lenses and other clear applications that require a finished, production part look but delivered with SL speed. Accura® 60's ability to resist humidity and maintain dimensional accuracy makes it an excellent choice not only for standard check models but also for investment casting patterns using the QuickCast™ build style."

Jason Dickman-President
American Precision Prototypes LLC

Bottle courtesy of R&D Prototype.

Technical Data

Liquid Material

Measurement	Condition	Value
Appearance		Clear
Liquid Density	@ 25 °C (77 °F)	1.13 g/cm3
Solid Density	@ 25 °C (77 °F)	1.21 g/cm3
Viscosity	@ 30 °C (86 °F)	150 - 180 cps
Penetration Depth (Dp)*		6.3 mils
Critical Exposure(Ec)*		7.6 mJ/cm2
Tested Build Styles		EXACT™, FAST™, QuickCast™

Post-Cured Material

Measurement	Condition	Metric	U.S.
Tensile Strength	ASTM D 638	58-68 MPa	8410 - 9860 PSI
Tensile Modulus	ASTM D 638	2,690-3,100 MPa	390 - 450 KSI
Elongation at Break (%)	ASTM D 638	5 -13 %	5 -13 %
Flexural Strength	ASTM D 790	87-101 MPa	12620 - 14650 PSI
Flexural Modulus	ASTM D 790	2,700-3,000 MPa	392 - 435 KSI
Impact Strength (Notched Izod)	ASTM D 256	15-25 J/m	0.3 - 0.5 ft-lb/in
Heat Deflection Temperature	ASTM D 648 @ 66 PSI @ 264 PSI	 53-55 °C 48-50 °C	 127-131 °F 118-122 °F
Hardness, Shore D		86	86
Co-Effcient of Thermal Expansion	ASTM E 831-93 TMA (T<Tg, 0-40 °C) TMA (T<Tg, 75-140 °C)	 71-131 µm/m-°C 153 µm/m-°C	
Glass Transition (Tg)	DMA, E"	58 °C	136 °F

* Dp/Ec values are the same on all systems.

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