

Services Provided By

PROTO3000
3D Engineering Solutions

Accura[®] 60 plastic

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

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



Dive mask faceplate design is patented and courtesy of Kirby Morgan Dive Systems and Scicon Technologies

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 investment casting
- Transparent assemblies
- Clear display models
- Concept and marketing models

FEATURES

- Durable and stiff
- High clarity
- Fast build speed
- Low viscosity formulation
- Humidity resistant parts
- 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
- Realize extended part life
- Maximize reliability with no user R&D

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"Accura 60 has exceeded our customer's expectations in every aspect. It has great physical properties, including durability, and reliable and consistent shrinkage behavior. Best of all, when we polished Accura 60 parts, they very closely resemble molded polycarbonate."

— Scott Turner - President - Scicon Technologies



TECHNICAL DATA

Liquid Material

MEASUREMENT	CONDITION	VALUE:
Appearance		Clear
Liquid Density	@ 25 °C (77 °F)	1.13 g/cm ³
Solid Density	@ 25 °C (77 °F)	1.21 g/cm ³
Viscosity	@ 30 °C (86 °F)	150 - 180 cps
Penetration Depth (Dp) *		6.3 mils
Critical Exposure (Ec) *		7.6 mJ/cm ²
Tested Build Styles		EXACT™, FAST™, QuickCast™

Post-Cured Material

MEASUREMENT	CONDITION	VALUE:
Tensile Strength	ASTM D 638	58 - 68 MPa (8410 - 9860 PSI)
Tensile Modulus	ASTM D 638	2690 - 3100 MPa (390 - 450 KSI)
Elongation at Break (%)	ASTM D 638	5 - 13 %
Flexural Strength	ASTM D 790	87 - 101 MPa (12620 - 14650 PSI)
Flexural Modulus	ASTM D 790	2700 - 3000 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	53 - 55 °C (127 - 131 °F)
	@ 264 PSI	48 - 50 °C (118 - 122 °F)
Hardness, Shore D		86
Co-efficient of Thermal Expansion	ASTM E 831-93	
	TMA (T<Tg, 0 - 40 °C)	71 µm/m-°C
	TMA (T<Tg, 75 - 140 °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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