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/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 | 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 @ 264 PSI | 53 - 55 °C (127 - 131 °F) 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)<br="">TMA (T<tg, -="" 140="" 75="" td="" °c)<=""><td>71 μm/m-°C 153 μm/m-°C</td></tg,></tg,> | 71 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.