

Accura[®] 25 Plastic



PROTOFACTURING



Accura[®] 25 Plastic produces durable prototypes that are ideally suited for automotive design verification and functional testing.

Simulate the properties and aesthetics of polypropylene and ABS with this accurate and flexible material.

Applications

- Functional components for assemblies and mock-ups for:
 - Automotive styling parts — trim, fascia, and other components
 - Consumer electronic components
 - Toys
 - Snap fit assemblies
- Master patterns for RTV/silicone molding
- Replace CNC machining of polypropylene and ABS to produce short-run plastic parts
- Simulate injection molded parts
- Concept and marketing models

Features

- Look and feel of molded polypropylene
- High flexibility with excellent shape retention
- Outstanding feature resolution and accuracy
- High production speed
- Fully developed and tested build styles



Automotive styling part.

Benefits

- Increased market opportunities for models
- Reliable and robust functional prototypes
- Suitable for master patterns
- More parts and better system utilization
- Maximize reliability with no user R&D



Accura[®] 25 Plastic has high flexibility, while retaining the original shape.

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

"Accura[®] 25 simulates the properties of a durable plastic in the range of polypropylene to low end ABS. The combination of its mechanical properties and its visual similarity to an injection molded plastic has led many of our customers to adopt Accura[®] 25 as their choice material for all models, unless otherwise specified. We have used it for customer applications ranging from durable enclosures and snap fit assemblies, to replacement parts for CNC machined delrin[®]. We have even had a few clients successfully use Accura[®] 25 parts as their production material for low volume applications. The properties and aesthetics make Accura[®] 25 the go-to resin for almost any application."

Todd Reese, President
Realize Inc.



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)	1.19 g/cm ³
Viscosity	@ 30 °C (86 °F)	250 cps
Penetration Depth (Dp)*		4.2 mils
Critical Exposure(Ec)*		10.5 mJ/cm ²
Tested Build Styles		EXACT™, FAST™, EXACT™ HR

Post-Cured Material

Measurement	Condition	Metric	U.S.
Tensile Strength	ASTM D 638	38 MPa	5,540 - 5,570 PSI
Tensile Modulus	ASTM D 638	2690-3100 MPa	230 - 240 KSI
Elongation at Break (%)	ASTM D 638	13 - 20 %	
Flexural Strength	ASTM D 790	55 - 58 MPa	7,960 - 8,410 PSI
Flexural Modulus	ASTM D 790	1,380 - 1,660 MPa	200 - 240 KSI
Impact Strength (Notched Izod)	ASTM D 256	19 - 24 J/m	0.4 ft-lb/in
Heat Deflection Temperature	ASTM D 648 @ 66 PSI @ 264 PSI	58 - 63 °C 51 - 55 °C	136 - 145 °F 124 - 131 °F
Hardness, Shore D		80	
Co-Efficient of Thermal Expansion	ASTM E 831-93 TMA (T<Tg, 0-20 °C) TMA (T<Tg, 75-140 °C)	107 x 10 ⁻⁶ m/m-°C 151 x 10 ⁻⁶ m/m-°C	
Glass Transition (Tg)	DMA, E"	60 °C	140 °F

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



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