



Accura[®] Xtreme Black

Tough/Durable Class

A functional prototyping plastic material for stereolithography that provides accurate, tough black parts with excellent surface finish and detail.

Stereolithography

ACCURA XTREME BLACK EFFICIENTLY DELIVERS ROBUST, RELIABLE PARTS THAT ARE EASY TO HANDLE AND TEST, OPTIMIZING THE PROTOTYPING WORKFLOW.

Accura Xtreme Black is a high-performance prototyping resin engineered for form, fit, and function applications. It offers exceptional durability for challenging assemblies such as snap-fit components, rugged enclosures, and consumer electronics and can serve as a practical alternative to CNC machining of thermoplastics such as ABS.

Its deep black color closely replicates the aesthetics of molded production parts and the low-viscosity formulation enhances build quality and simplifies finishing, while its sharp detail and dimensional accuracy ensure precise results.

With tough mechanical properties and resistance to modest temperatures without distortion, Accura Xtreme Black is the ideal multi-functional resin for SLA.



APPLICATIONS

- Form, fit and function prototypes
- Durable and challenging assemblies
 - Snap fit assemblies
 - Tough enclosures
 - Consumer electronic components
- General purpose prototyping
- Master patterns for RTV/silicone molding
- Replace CNC machining of ABS

BENEFITS

- A black version of Accura Xtreme
- Better replicates production with aesthetics of molded parts
- Minimize post process steps and need to paint parts
- Ease-of-use and fast processing
- Withstands modest temperatures without distortion

FEATURES

- Deep black color.
- Low viscosity resin gives better build quality and post processing.
- Formulated for accurate parts and low cured linewidth giving excellent, sharp detail.
- Tough properties make parts more robust for handling and testing.

MATERIAL PROPERTIES

The full suite of mechanical properties is given per ASTM and ISO standards where applicable. In addition, properties such as flammability, dielectric properties, and 24 hour water absorption are provided. This allows for better understanding of the material capability to aid in design decisions for the material. All parts are conditioned per ASTM recommended standards for a minimum of 40 hours at 23 °C, 50% RH.

Solid material properties reported were printed along X-axis.

LIQUID MATERIAL			
MEASUREMENT	CONDITION / METHOD	METRIC	US
Viscosity	Brookfield viscometer @ 25°C (77°F)	200 cPs	484 lb/ft·h
Color		Black	
Liquid Density	Kruss K11 Force Tensiometer @ 25°C (77°F)	1.14 g/cm ³	0.04 lb/in ³
Default Print Layer Thickness	Internal	100 µm	0.004 in

SOLID MATERIAL						
METRIC	ASTM METHOD	METRIC	ENGLISH	ISO METHOD	METRIC	ENGLISH
PHYSICAL				PHYSICAL		
Solid Density	ASTM D792	1.21 g/cm ³	0.044 lb/in ³	ISO 1183	1.21 g/cm ³	0.044 lb/in ³
24 Hour water absorption	ASTM D570	0.85 %	0.85 %	ISO 62	0.85 %	0.85 %
MECHANICAL				MECHANICAL		
Tensile Strength Ultimate	ASTM D638 Type IV	43 MPa	6300 psi	ISO 527 -1/2	45 MPa	6500 psi
Tensile Strength at Yield	ASTM D638 Type IV	40 MPa	5800 psi	ISO 527 -1/2	45 MPa	6500 psi
Tensile Modulus	ASTM D638 Type IV	2600 MPa	370 ksi	ISO 527 -1/2	2100 MPa	300 ksi
Elongation at Break	ASTM D638 Type IV	27.4 %	27.4 %	ISO 527 -1/2	15.4 %	15.4 %
Elongation at Yield	ASTM D638 Type IV	3.7 %	3.7 %	ISO 527 -1/2	3.9 %	3.9 %
Flex Strength	ASTM D790	59 MPa	8600 psi	ISO 178	54 MPa	7900 psi
Flex Modulus	ASTM D790	1600 MPa	230 ksi	ISO 178	1500 MPa	217 ksi
Izod Notched Impact	ASTM D256	30 J/m	0.6 ft-lb/in	ISO 180-A	23 J/m ²	0.0111 ft-lb/in ²
Izod Unnotched Impact	ASTM D4812	540 J/m	10 ft-lb/in	ISO 180-U	510 J/m ²	0.2414 ft-lb/in ²
Shore Hardness	ASTM D2240	79 D	79 D	ISO 7619	79 D	79 D
THERMAL				THERMAL		
Tg (DMA, E")	"ASTM E1640 (E"" at 1°C/min)"	29 °C	84 °F	"ISO 6721-1/11 (E"" at 1°C/min)"	29 °C	84 °F
HDT 0.455MPa/66PSI	ASTM D648	60 °C	141 °F	ISO 75 - 1/2 B	47 °C	116 °F
HDT 1.82MPa/264 PSI	ASTM D648	50 °C	123 °F	ISO 75 - 1/2 A	40 °C	104 °F

