

# ABS-M30

for FORTUS 3D Production Systems

**FORTUS**  
3D PRODUCTION SYSTEMS

ABS-M30 is up to 25-70 percent stronger than standard Stratasys ABS and is an ideal material for conceptual modeling, functional prototyping, manufacturing tools, and end-use parts. ABS-M30 has greater tensile, impact, and flexural strength than standard ABS. Layer bonding is significantly stronger than that of standard ABS, for a more durable part. This results in more realistic functional tests and higher quality parts for end use. When combined with a Fortus 3D Production System, ABS-M30 gives you Real Parts™ that are stronger, smoother, and with better feature detail.



Mechanical Properties <sup>1</sup>	Test Method	English	Metric
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	5,200 psi	36 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	350,000 psi	2,413 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	4%	4%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	8,800 psi	61 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	336,000 psi	2,317 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	2.6 ft-lb/in	139 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	5.3 ft-lb/in	283 J/m

Thermal Properties <sup>3</sup>	Test Method	English	Metric
Heat Deflection (HDT) @ 66 psi, 0.125" unannealed	ASTM D648	204°F	96°C
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	180°F	82°C
Vicat Softening Temp. (Rate B/50)	ASTM D1525	210°F	99°C
Coefficient of Thermal Expansion (flow)	ASTM E831	4.9E-05 in/in/°F	8.82E-05 mm/mm/°C
Coefficient of Thermal Expansion (xflow)	ASTM E831	4.7E-05 in/in/°F	8.46E-05 mm/mm/°C
Glass Transition (T <sub>g</sub> )	DSC (SSYS)	226°F	108°C
Melt Point	-----	Not Applicable <sup>2</sup>	Not Applicable <sup>2</sup>

Other <sup>3</sup>	Test Method	Value
Specific Gravity	ASTM D792	1.04
Flame Classification	UL94	HB (0.06", 1.5 mm)
Rockwell Hardness	ASTM D785	109.5
Dielectric Strength	IEC 60112	28.0 kV/mm

► See reverse for color options and system availability.

The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, etc. Actual values will vary with build conditions. Tested parts were built on Fortus 400mc @ 0.010" (0.254 mm) slice. Product specifications are subject to change without notice.

<sup>1</sup> Build orientation is on side long edge. <sup>2</sup> Due to amorphous nature, material does not display a melting point. <sup>3</sup> Literature value unless otherwise noted.



System Availability	Layer Thickness Capability	Support Structure	Available Colors
Fortus 360mc Fortus 400mc Fortus 900mc	0.013 inch (0.330 mm) 0.010 inch (0.254 mm) 0.007 inch (0.178 mm) 0.005 inch (0.127 mm) <sup>1</sup>	Soluble Supports	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #f0f0f0; border: 1px solid #ccc; margin-right: 5px;"></span> Ivory</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #fff; border: 1px solid #ccc; margin-right: 5px;"></span> White</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #333; border: 1px solid #ccc; margin-right: 5px;"></span> Black</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #666; border: 1px solid #ccc; margin-right: 5px;"></span> Dark Grey</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #f00; border: 1px solid #ccc; margin-right: 5px;"></span> Red</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #00f; border: 1px solid #ccc; margin-right: 5px;"></span> Blue</li> </ul>

<sup>1</sup>0.005 inch (0.127 mm) layer thickness not available for Fortus 900mc

## At the core: Advanced FDM<sup>®</sup> technology

Fortus systems are based on patented Stratasys FDM — Fused Deposition Modeling — technology. FDM is the industry's leading additive fabrication technology, and the only one that uses production grade thermoplastics, enabling the most durable parts.

Fortus systems use a wide range of thermoplastics with advanced mechanical properties so your parts can endure high heat, caustic chemicals, sterilization, and high impact applications.

## No special facilities needed

You can install a Fortus 3D Production System just about anywhere. No special venting is required because Fortus systems don't produce noxious fumes, chemicals, or waste.

## No special skills needed

Fortus 3D Production Systems are easy to operate and maintain compared to other additive fabrication systems because there are no messy powders or resins to handle and contain. They're so simple, an operator can be trained to operate a Fortus system in less than 30 minutes.

## Get your benchmark on the future of manufacturing

Fine details. Smooth surface finishes. Accuracy. Strength. The best way to see the advantages of a Fortus 3D Production System is to have your own part built on a Fortus system. Get your free part at: [www.fortus.com/benchmark](http://www.fortus.com/benchmark).

For more information about Fortus systems, materials and applications, call **888.480.3548** or visit [www.fortus.com](http://www.fortus.com)

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