

# ABS-M30i

for Fortus 3D Production Systems



PARTS FOR PROTOTYPE AND PRODUCTION · ON DEMAND

ABS-M30i is a high strength material well suited for the medical, pharmaceutical and food packaging industries. Parts manufactured with ABS-M30i material are biocompatible (ISO 10993 USP Class VI)\* and can be gamma or EtO sterilized. When combined with Fortus® 3D Production Systems, ABS-M30i gives you biocompatible Real Parts™ with excellent mechanical properties that are well suited for conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.



Mechanical Properties <sup>2</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	2,400 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	2,300 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>2</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 (Tg)	DSC (SSYS)	226°F	108°C
Melt Point	-----	Not Applicable <sup>3</sup>	Not Applicable <sup>3</sup>

Electrical Properties <sup>4</sup>	Test Method	Value Range
Volume Resistivity	ASTM D257	4.0x10e14 - 5.0x10e13 ohms
Dielectric Constant	ASTM D150-98	2.9 - 2.7
Dissipation Factor	ASTM D150-98	.0053 - .0051
Dielectric Strength	ASTM D149-09, Method A	370 - 80 V/mm
Dielectric Strength	IEC 60112	28.0 kV/mm

Other <sup>2</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

# ABS-M30i

System Availability	Layer Thickness Capability	Support Structure	Available Colors
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>5</sup>	Soluble Supports	□ Ivory

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.

\*It is the responsibility of the finished device manufacturer to determine the suitability of all the component parts and materials used in their finished products.

<sup>1</sup>Build orientation is on side long edge.

<sup>2</sup>Literature value unless otherwise noted.

<sup>3</sup>Due to amorphous nature, material does not display a melting point.

<sup>4</sup>All Electrical Property values were generated from the average of test plaques built with default part density (solid). Test plaques were 4.0 x 4.0 x 0.1 inches (102 x 102 x 2.5 mm) and were built both in the flat and vertical orientation. The range of values is mostly the result of the difference in properties of test plaques built in the flat vs. vertical orientation.

<sup>5</sup>0.005 inch (0.127 mm) layer thickness not available for Fortus 900mc



For more information about RedEye On Demand, call **866-882-6934** or visit [www.RedEyeOnDemand.com](http://www.RedEyeOnDemand.com)

#### Worldwide Headquarters

##### RedEye On Demand

8081 Wallace Road  
Eden Prairie, MN 55344  
+1 866-882-6934 (US Toll Free)  
+1 952-906-2725 (Int'l)  
+1 952-906-2765 (Fax)

[GoDigital@RedEyeOnDemand.com](mailto:GoDigital@RedEyeOnDemand.com)

#### European Headquarters

##### Materialise

Technologielaan 15  
3001 Leuven  
Belgium  
+32 16 39.67.60  
+32 16 39.62.75 (Fax)

[GoDigitalEU@RedEyeOnDemand.com](mailto:GoDigitalEU@RedEyeOnDemand.com)

#### Australasia Headquarters

##### RapidPro

3/17 Diane Street  
Mornington, 3931  
Victoria, Australia  
+61 3 5976 3603 (Int'l)  
+61 3 5973 6001 (Fax)

[enquiries@RedEyeOnDemand.com.au](mailto:enquiries@RedEyeOnDemand.com.au)

#### ISO 9001:2008 Certified

©2011 Stratasys Inc. All rights reserved. Stratasys, RedEye, FDM, and Fortus are registered trademarks. FDM Technology, Fused Deposition Modeling, Real Parts, Fortus 360mc, Fortus 400mc, Fortus 900mc, and RedEye On Demand are trademarks of Stratasys Inc. \*ULTEM 9085 is a trademark of SABIC Innovative Plastics IP BV. All other trademarks are the property of their respective owners. Product specifications subject to change without notice. Printed in the USA. MS-RedEye-ABS-M30i-05-11



# Redeye

PARTS FOR PROTOTYPE AND  
PRODUCTION • ON DEMAND