MAKERBOT TOUGH FILAMENT



Engineered for durable 3D printed prototypes and fixtures.

Print with confidence. Print Tough.

- 2X the impact strength of ABS for high durability prototypes
- Ideal for working prototypes and manufacturing aids
- Significantly less warping and curling than ABS without the need for heated build plates
- Highly-machinable for a wide range of post-processing techniques
- More office friendly than ABS

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DURABLE, USABLE PARTS
At 2X the impact strength of ABS, MakerBot® Tough™ filament offers superior durability for industrial prototyping and manufacturing aid applications. With tensile and flexural strength that match ABS, designers and engineers can create parts that hold up under all types of stress.

PRINT WITH CONFIDENCE
MakerBot Tough filament was developed not only for its strength and part performance but also to overcome two of the most glaring issues that hamper ABS: warping and curling. With MakerBot Tough filament, parts can be printed with ease on MakerBot 3D printers without the need for excessive adjustments or tweaking.

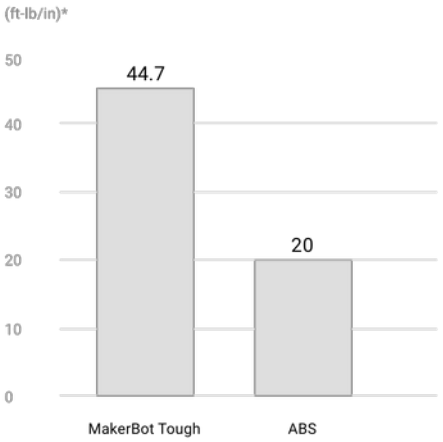
MACHINE AND FINISH
The same properties that give MakerBot Tough filament its durability also make it ideal for machining and post-processing. Throw your printed part into the CNC or drill press; tap some threads and bolt on a steel bracket, or sand the surface down and apply paint for a finished presentation piece.

TECH SPECS

PROFORMANCE PROPERTIES

Filament	Imperial	Metric
Flexural Strength	9,190 psi	63.3 MPa
Flexural Modulus	343,000 psi	2,364 MPa
Tensile Strength	5,710 psi	39.3 MPa
Tensile Modulus	395,000 psi	2723 MPa
Elongation (%)	2.09 %	2.09 %
Notched IZOD Hinged (impact)	7.2 ft-lb/in	384 J/m
Unnotched IZOD Hinged (impact)	47.7 ft-lb/in	2550 J/m

IZOD IMPACT STRENGTH - UNNOTCHED



AVAILABLE IN FOUR COLORS



SLATE GREY
MP06997



SAFETY ORANGE
375-0009A



STONE WHITE
375-0008A



ONYX BLACK
375-0007A

THERMAL PROPERTIES

	°F	°C
Glass Temp	140-149°F	60-65°C
Melting Temp	302-320°F	150-160°C
Nozzle Temp	419°F	215°C

*Notched/Unnotched IZOD Hinged data is measured in ft lb/in. All tests were performed following ASTM standard protocol with injection molded specimens from the same resin used to create MakerBot filaments. The Flexural strength test was performed according to standard ASTM D790 protocol; The Tensile Strength test was performed according to standard ASTM D628 protocol. The impact IZOD Strength test was performed according to standard ASTM D256 protocol.