

ULTIMAKER ABS

<u>Chemical Name</u>	Acrylonitrile butadiene styrene
<u>Description</u>	Our newly developed ABS filament is one of the easiest to use on the market. When combined with the Ultimaker 2+ and Cura's material profiles, even tricky mechanical parts are realized with ease.
<u>Key features</u>	Designed to prevent warping, excellent interlayer adhesion, good bed adhesion, enhanced strength for functional prototypes and manufacturing end-use parts, enhanced mechanical properties over regular ABS.
<u>Applications</u>	Visual prototypes, functional prototypes and short run manufacturing.
<u>Non suitable for</u>	Applications where the printed part is exposed to temperatures up to 85 °C, long term UV exposure can negatively affect properties of an ABS print.

FILAMENT SPECIFICATIONS

	VALUE	METHOD
<u>Diameter</u>	2.85±0.10 mm	-
<u>Max. roundness deviation</u>	0.1 mm	-
<u>Net filament weight</u>	750 g	-

COLOR INFORMATION

PRODUCT NUMBER	COLOR	RAL NUMBER
UM9701	ABS Black	9017
UM9702	ABS White	9003
UM9703	ABS Red	3020
UM9704	ABS Blue	5002
UM9705	ABS Silver	9006
UM9706	ABS Pearl Gold	1036
UM9707	ABS Green	6018
UM9708	ABS Orange	2008
UM9709	ABS Yellow	1023
UM9710	ABS Gray	7011

MECHANICAL PROPERTIES (*)	TYPICAL VALUE	TEST METHOD
<u>Tensile modulus</u>	2030 MPa	ISO 527 (1 mm/min)
<u>Tensile stress at yield</u>	43.6 MPa	ISO 527 (50 mm/min)
<u>Tensile stress at break</u>	-	-
<u>Elongation at yield</u>	4.8%	ISO 527 (50 mm/min)
<u>Elongation at break</u>	34%	ISO 527 (50 mm/min)
<u>Flexural strength</u>	-	-
<u>Flexural modulus</u>	-	-
<u>Izod impact strength, notched (at 23°C)</u>	-	-
<u>Izod impact strength, unnotched (at 23°C)</u>	-	-
<u>Charpy impact strength, notched (at 23°C)</u>	58 KJ/m ²	ISO 179
<u>Hardness (R scale)</u>	-	-
<u>Shore A</u>	97	-

THERMAL PROPERTIES	TYPICAL VALUE	TEST METHOD
<u>Mass flow rate at 260 °C (5 kg)</u>	41 g/10 min	ISO 1133
<u>Heat deflection (HDT) at 0.455 MPa</u>	-	-
<u>Heat deflection (HDT) at 1.82 MPa</u>	-	-
<u>Glass transition</u>	97 °C	ISO 306
<u>Coefficient of thermal expansion (flow)</u>	-	-
<u>Coefficient of thermal expansion (xflow)</u>	-	-
<u>Melting temperature</u>	225-245 °C	ISO 294
<u>Thermal shrinkage (hot air, 100 °C, 30min)</u>	-	-

OTHER PROPERTIES	TYPICAL VALUE	TEST METHOD
<u>Specific gravity</u>	1.10	ISO 1183
<u>Flame classification</u>	-	-

(*) On injection molded bars.

TYPICAL PRINTING CONDITIONS

<u>Bed temperature</u>	80-90 °C + glue
<u>Printing temperature (0.4 mm nozzle)</u>	240-260 °C
<u>Printing speed guideline (0.4 mm nozzle)</u>	30-50 mm/s

NOTES

Properties reported here are average of a typical batch.

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VERSION

Version 1.002

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