



Technical Data Sheet

Issued: March 21, 2018

Revised: N/A

Platinum Series ABS Filament

SECTION 1, IDENTIFICATION

Product Part Number: [AW3D-F06003](#)

Manufacturer: Airwolf 3D

Address: 11208 Young River Avenue,
Fountain Valley, CA 92708

Phone Number: +1 949-478-2933

Recommended Use: 3D printing filament

Restrictions on Use: For use with 3D printers

AIRWOLF 3D TESTED PROPERTIES

Ultimate Strength: 38.6 MPa

Elongation at Break: 22.2 %

(see "Methodology of Test" for details)

SECTION 2, DESCRIPTION

Description: Acrylonitrile butadiene styrene for functional prototypes or end-use production parts.

Applications: Concept modeling
Visual and functional prototyping
Manufacturing tools
End use parts
Short run manufacturing
Automotive

Key Features: Good mechanical properties and interlayer adhesion, minimal warping and reliable bed adhesion.

SECTION 3, SPECIFICATIONS (PER MANUFACTURER)

EXTRUDER TEMPERATURE 235C - 260C

BED TEMPERATURE 110C – 130C

HEATED BED Required

RECOMMENDED BUILD SURFACE [Wolfbite for ABS, PETG, TPU, and TPE](#)

DIAMETER	2.88mm
COLOR	Neon Orange, Black, Black, White, Natural, Red, Light Blue, Green, Grey, Yellow, Grape, Dark Blue
COMPATIBLE MACHINE	AXIOM , AXIOM 20 , AXIOM Dual Extruder, EVO , HD Series
COMPATIBLE SUPPORT MATERIAL	HydroFill Water-Soluble Support
MECHANICAL	
Ultimate Strength when 3D Printed:	38.6 MPa
Elongation at Break when 3D Printed:	22.2 %
UL FLAMMABILITY	
UL Recognized, 94HB Flame Class Rating (3) 1.52 mm	UL 94

SECTION 4, ADDITIONAL INFORMATION

For challenging prints with complex internal geometry, ABS is compatible with [HydroFill Water-Soluble Support](#).

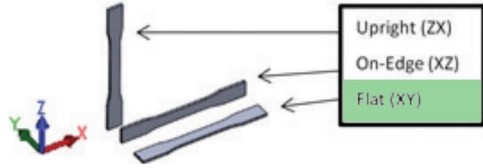
Acetone vapor treatment can minimize layer lines.

Methodology of Tests performed by Airwolf 3D:

Airwolf 3D tested this material, in its 3d printed form, for the mechanical properties of “Ultimate Strength” and “Elongation at Break” per ISO 527 standards. Specimens were printed on an AXIOM 3D printer with a nozzle orifice size 0.5mm. The specimens were “dog bone” shaped with a size of 75mm x 10mm x 2mm and printed with 90% fill density. Wolfbite adhesive was used to adhere the part to the heated bed during print cycle. The default “Standard” setting in APEX slicing software was used. Details are as follows:

Layer height:	0.22mm
Shell thickness:	0.5mm
Bottom/Top thickness:	1.2mm
Fill density:	90%
Printing temp:	250C
Bed temp:	110C
Flow:	100%
Color:	Natural

Specimens were printed flat on the XY plane.



The equipment used: MODEL 1ST Electromechanical Testing Machine by Tinius Olsen (Crosshead).

A minimum of six specimens were tested. The Ultimate Strength and Elongation at Break values were determined by calculating the average of all specimens tested.

Disclaimer

Any technical information or assistance provided herein is given and accepted at your risk, and neither Airwolf 3D or its affiliates make any warranty relating to it or because of it. Neither Airwolf 3D nor its affiliates shall be responsible for the use of this information, or of any product, method or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability or fitness of any product; and nothing herein waives any of Airwolf 3D's conditions of sale. Specifications are subject to change without notice.

Version 1.000
Date 03/21/2018

AIRWOLF 3D FILAMENT - ABS
NATURAL

ISO 527 Tensile (Crosshead)



Ultimate Strength MPa	Elongation at Break %	Yield Strength MPa
35.7	15.4	N/F
40.4	17.3	N/F
38.9	18.2	N/F
38.4	25.9	N/F
38.9	38.6	N/F
39.5	17.5	N/F
Average 38.6	22.2	N/A
SD	8.86	N/A

