

Guide to printing with Amphora HT5300

Revolutionize your 3D printed creations with Eastman Amphora™ 3D polymer, a low-odor, styrene-free material that is uniquely suited for advanced users.

The following recommendations have been established for optimal Amphora HT5300 printing conditions. Amphora HT5300 should always be used in a well-ventilated environment. Follow the 3D printing instructions from the manufacturer when using a 3D printer. **SERIOUS INJURY MAY OCCUR IF 3D PRINTERS ARE MISUSED OR THE FILAMENT, PRINTER, OR 3D OBJECTS ARE TOUCHED DURING OPERATION OR HANDLED IMPROPERLY.** Users are solely responsible for the safety of their 3D printed objects and compliance with all applicable regulations.

Variables	Recommended settings/range	Tips
Temperature	250°–285°C	Start at 250°C and increase temperature by 5° steps until desired flow and proper layer adhesion are established. Different printers may require slightly different temperature settings. Start low and work up to the desired temperature.
Temperature for a heated bed	110°–120°C	If possible, use an enclosed chamber to maintain ambient heat and reduce further warpage. In addition, hair spray or a glue stick works well to adhere the print to the bed and reduce warping from the bed.
Percent (%) flow	100%–110%	Set first layer height at 120% with a width of 120% and 40% speed.
Retraction distance	3 mm	Retraction distance varies from printer to printer. Use suggested retraction distance with a 0.2-mm vertical lift and 0.14-mm coasting distance.
Retraction speed	45 mm/sec	Experiment with your printer as necessary to determine optimal retraction settings.
Printing speed	35–50 mm/sec	Slower print speeds will yield tougher, more transparent parts.
Layer height	0.1–0.2 mm on a 0.4-mm nozzle 0.3–0.4 mm for a 0.8-mm nozzle	Monitor the first layer to make sure no material sticks to the nozzle and accumulates. If the first layer has no buildup or skips in the layer, the remaining print should be successful.
Cooling fan	0%–50%	This percent varies from printer to printer. In general, minimize cooling to increase layer adhesion. Use cooling only for bridging. Excessive cooling can cause warping defects.
Best bridging	Slower speed with 100% cooling	Aim to run the fan at 100% rate during bridging operations when attempting to print overhangs or gaps without physical support. If bridging is done too quickly, break melt will occur. However, if done too slowly, layers will start sagging.
Finish	Cool bed to less than 40°C.	Minimize print distortion and allow easier removal by cooling before attempting to remove the print from the bed.

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**Eastman Chemical Company
Corporate Headquarters**

P.O. Box 431

Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)

Other Locations, +(1) 423-229-2000

www.eastman.com/locations

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