fillamentum INDUSTRIAL

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SO LET'S CREATE SOMETHING AWESOME

3D PRINTING GUIDE
POLYPROPYLENE PP 2320

Heated chamber recommended

Do not dry before use

BASIC OVERVIEW

HARDNESS

IMPACT RESISTANCE

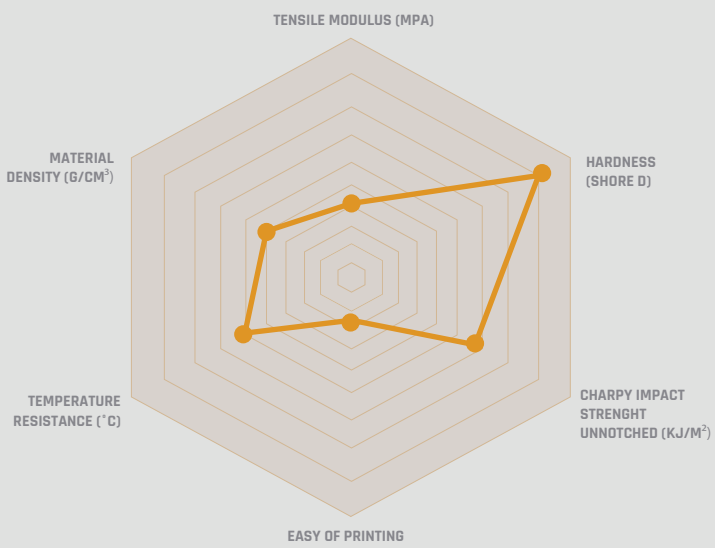
FLEXIBILITY

EASY OF PRINTING

WEATHER RESISTANCE

WEAR AND ABRASION RESISTANCE

DETAILED VIEW



HEATED CHAMBER/ENCLOSURE

A heated chamber or enclosure is strongly recommended when printing with Polypropylene. The material has a high tendency to shrink as it cools, leading to warping or cracking. The heated chamber helps maintain an even temperature throughout the print, reducing these risks, particularly for larger parts or those with intricate geometries.

For vase mode printing, a heated chamber is almost a necessity due to the significant shrinkage of the material, which can lead to deformed or failed prints.

BRIDGING AND SMALL FEATURES

Polypropylene can struggle with bridging and small details, making certain types of prints challenging:

Bridging: For most bridges, using supports is recommended, as PP tends to struggle without them.

Small Features: Avoid very small details in models, as PP can easily deform or print poorly in these areas. If small details are unavoidable, consider lowering the speed and adjusting cooling.

WARPING PREVENTION TIPS

Enclosure/Heated Chamber: Maintaining a consistent ambient temperature during printing helps prevent warping.

Increase Bed Adhesion: Use brims or rafts, and ensure the adhesive is applied correctly.

Part Placement: Keep parts closer to the center of the bed where temperatures are more consistent.

Reduce Fan Speed: Keep the cooling fan to a minimum (0 - 15 %) for the initial layers to allow the part to cool gradually.

BASIC NON HIGH-SPEED PRINTERS SETUP

Print Temp:
225 - 245 °C

For stronger layer adhesion, increase the temperature to 240 - 245 °C, especially for more durable parts.

Bed Temp:
90 - 105 °C

A stable heated bed is critical to prevent warping and shrinkage, which are common in Polypropylene.

Printing Speed:
40 - 120 mm/s

Slower speeds are recommended to ensure good layer bonding and reduce the chance of warping. Especially if youre printing with older printer.

Cooling Fan:
0 - 15 %

For regular prints, keep the fan speed low (about 15 %) from the 10th layer onwards.

DISCLAIMER:
Printing at lower speeds may result in reduced adhesion towards the end of the print, even if all procedures are followed. Please do not hesitate to contact us for support.

HIGH SPEED PRINTERS SETUP

Print Temp:
225 - 265 °C

Bed Temp:
90 - 110 °C

A stable heated bed is critical to prevent warping and shrinkage, which are common in Polypropylene.

Printing Speed:
40 - 200 mm/s

DISCLAIMER:

Please ensure you only use our recommended type of print bed and adhesive. The type of our heated print bed may differ from that of your printer. Remember, printing with PP 2320 is extremely demanding and requires precise preparation. Follow our specified procedures closely.

Cooling Fan:
0 - 50 %

At high speeds it is better to increase the cooling, but be aware that this may affect the grip and warping.

DATASHEETS AND MORE...
24/7 AVAILABLE

ADHESION TO THE BED

Achieving good adhesion is one of the most significant challenges with Polypropylene. Here are several strategies to enhance adhesion:

Surface Material: The best results are achieved using a Polypropylene plate. But mirror/glass surfaces can also work with proper adhesive application. You can also use our LockPAd.

Adhesives: The use of Magigoo PP or similar specialized adhesives designed for Polypropylene is recommended. For example Bio P-activator 208.

Packing Tape: You can also print on packing tape (polypropylene-based) applied to the bed. When using this method, a raft is recommended to ensure better adherence.

Brim/Raft: A brim of at least 10 mm or using a raft is highly recommended. This helps anchor the print to the bed and prevent early detachment due to shrinkage.

Extra Tips: Clean the bed surface thoroughly before printing!

Very important: Lower the first layer speed and ensure the nozzle is close to the bed to increase bed adhesion.

STORAGE AND DRYING

PP 2320 is not sensitive to moisture. No need to dry.
If it is necessary to dry the filament that has been standing somewhere for a long time than is a maximum time of 2 hours at 80 °C.

POST-PROCESSING

PP 2320 parts can be smoothed or welded using chemical treatments with PP-compatible solvents. However, take care when handling these chemicals.

ARE YOU MISSING THE RIGHT ANSWER?

CHOOSE THE PLACE YOU'D LIKE TO CONNECT WITH US.

CLICK FOR FILLA FELLA CHAT BOT
24/7 INSTANT ANSWER

HELPDESK@FILLAMENTUM.COM
REACTION TIME 12 - 16 HOUR

CALL US IF YOU WANT +420 725 463 731
BETWEEN 8 AM AND 4 PM CENTRAL EUROPEAN TIME.

WE GUARANTEE THE BEST QUALITY WITH CPK PROCESS MEASUREMENT.

At Fillamentum, we go beyond achieving a lower filament diameter. We focus on CPK (Process Capability Index) could be known as a Sigma within Industry. It is a crucial measure that ensures every spool of filament meets the highest standards. Here is Why CPK is essential for you and why it is more important than just diameter.

WE PROVIDE FILAMENT INSPECTION

RECOMMENDED

WINNER OF 2021