

3D PRINTING GUIDE ASA CF10 CARBON

 **Plug in and print.**
Compatible with high speed printers.

 **Second life**
Sustainable spool

 **Dry before use it**

BASIC OVERVIEW

HARDNESS



IMPACT RESISTANCE



FLEXIBILITY



EASY OF PRINTING



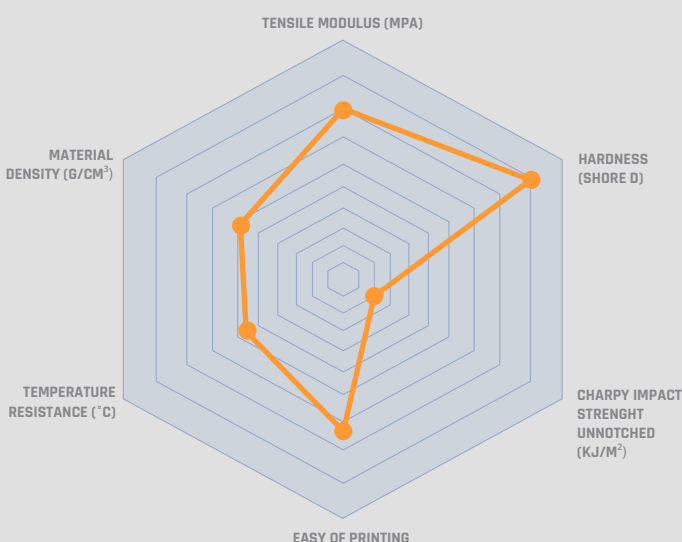
WEATHER RESISTANCE



WEAR AND ABRASION RESISTANCE



DETAILED VIEW



BASIC NON HIGH-SPEED PRINTERS SETUP

 **Print Temp:**
245 – 260 °C

For high-speed printing,
you can go up to 275 °C).

 **Bed Temp:**
80 – 105 °C

 **Printing Speed:**
30 – 50 mm/s

Recommended speed
depends on the printer type.

 **Cooling Fan:**
0 – 20 %

Lower cooling helps minimize
warping in larger prints.

Nozzles: It's necessary to use hardened steel / Ruby or any wear-resistant nozzle
for printing this material due to carbon fibers in this material.

HIGH SPEED PRINTERS SETUP

 **Print Temp:**
250 – 275 °C

 **Printing Speed:**
80 – 120 mm/s

Recommended speed
depends on the printer type.

 **Bed Temp:**
90 – 105 °C

 **Cooling Fan:**
0 – 20 %

Lower cooling helps minimize
warping in larger prints.

DISCLAIMER:
Drying: Highly recommended 80 °C for 3 hours
Storage 15 – 25 °C with low humidity.

TIPS BEFORE YOU START

HEATED BED SURFACE:
PEI, LockPAid

ADHESIVE:
Magigoo, PVA glue, Dimafix

RAFT/SKIRT/BRIM:
Skirt / Brim 5 mm

HEATED CHAMBER/ ENCLOSURE:
Not needed but recommended

 **DATASHEETS AND MORE..**
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TIPS FOR PREVENTING COMMON ISSUES WITH ASA CF10 CARBON

1 Warping Prevention

ASA CF10 carbon offers significantly better dimensional stability compared to standard ASA and is much less prone to warping and deformation during printing. Nevertheless, you can achieve the best possible results by following the recommendations listed below

Heated Chamber: Print in a closed, heated chamber if possible to maintain consistent temperatures. If you don't have a heated chamber, preheat enclosure to 50 °C for at least 30 minutes before printing. Use BED for it.

Experiment with slower speeds: Try printing at slower speeds to improve print quality, particularly for more complex models.

4 Keeping the Filament Dry

Storage: Store filament in a dry environment, preferably in sealed bags with desiccants or in a heated box.

Filament drying: If the filament absorbs moisture, we recommend drying it at 80 °C for 3 hours to ensure optimal printing conditions.

7 Vase Mode

When printing in vase mode, choose an extrusion width of at least 0.8 mm. Lower the print speed and increase cooling for better results. A preheated chamber is required.

2 Protection Against Cracking and Delamination

ASA CF10 Carbon may sometimes show cracking between layers or poor layer bonding.

Lower fan speed: Set the cooling fan to lower values (0 – 15 %) to prevent excessive cooling, which can lead to cracking.

Optimal temperatures: Ensure that the nozzle and bed temperatures are within the recommended ranges (245 – 275 °C for the nozzle, 80 – 105 °C for the bed). Lower temperatures can cause poor layer adhesion.

5 Safety Precautions

Ensure good ventilation around the 3D printer. ASA CF10 Carbon fumes can be potentially hazardous when inhaled.

8 Design tips

For achieving more structural carbon fiber surface use higher layer height

3 Minimizing Stringing

If fine strings (stringing) appear during ASA CF10 Carbon printing, you can use the following tips: These tips also help prevent other unwanted issues, such a brittleness, poor layer adhesion or oozing.

Proper retraction: Ensure that your retraction settings are correct. Increasing retraction can help reduce stringing.

Lower nozzle temperature: If stringing occurs, try reducing the nozzle temperature to the lower end (245 °C).

Nozzle cleaning: Check for any clogging in the nozzle, which could cause imperfections and stringing.

6 Recommendations for Overhangs

For overhangs greater than 45 °C, we recommend using smaller layer heights and ensuring enough cooling time to prevent deformation of the overhangs.

9 Supports

For the best print results, especially for complex models, we recommend using supports made from a different material to improve print quality and make support removal easier.

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