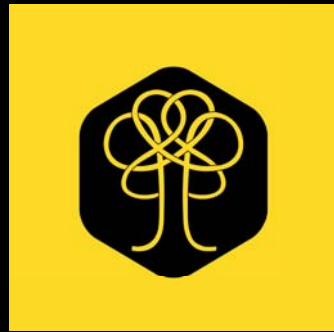


TREEDFILAMENTS



HOW TO PRINT PEEK



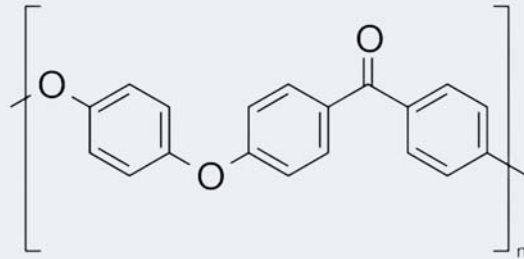
SUMMARY

The PEEK metamorphosis

Best condition to aneal with printer

Best condition to aneal in oven





The PEEK metamorphosis

PEEK is the acronym of **Polyeter Eter Eter Ketone**, the most performer commercial polymer, used in a wide high techical application, from implant part to aerospace components.

It is appreciate for his chemical resistance, high working temperature, high mechanical characteristic.

But to obtain those results it must be worked correctly.

Why?

The polymer can change his structure, from amorphous to crystal, in depending by the temperature used to cooling the component printed.

Typical amourphous colour : dark brown near to transparent.

Typical crystal colour : light beige.

The crystallization is obtained with a correct temperature, typical 170°/180°C, and a progressive and lower cooling.



Best condition to aneal with printer



Dry 4 h - 100°C



Temperature nozzle 390° - 420° C



Temperature vented heated chamber < 80° C
or 170°- max 190°C



Temperature heated build plate 80° - 120 °C



Note for printer

DRY

The moisture on natural PEEK filament is only on surface , but it's a rule dry before use .
For CF reinforced it's better dry for more time, 6-7 hours at 110 °

NOZZLE

The nozzle must be clean, best in hard metal

HEATED CHAMBER

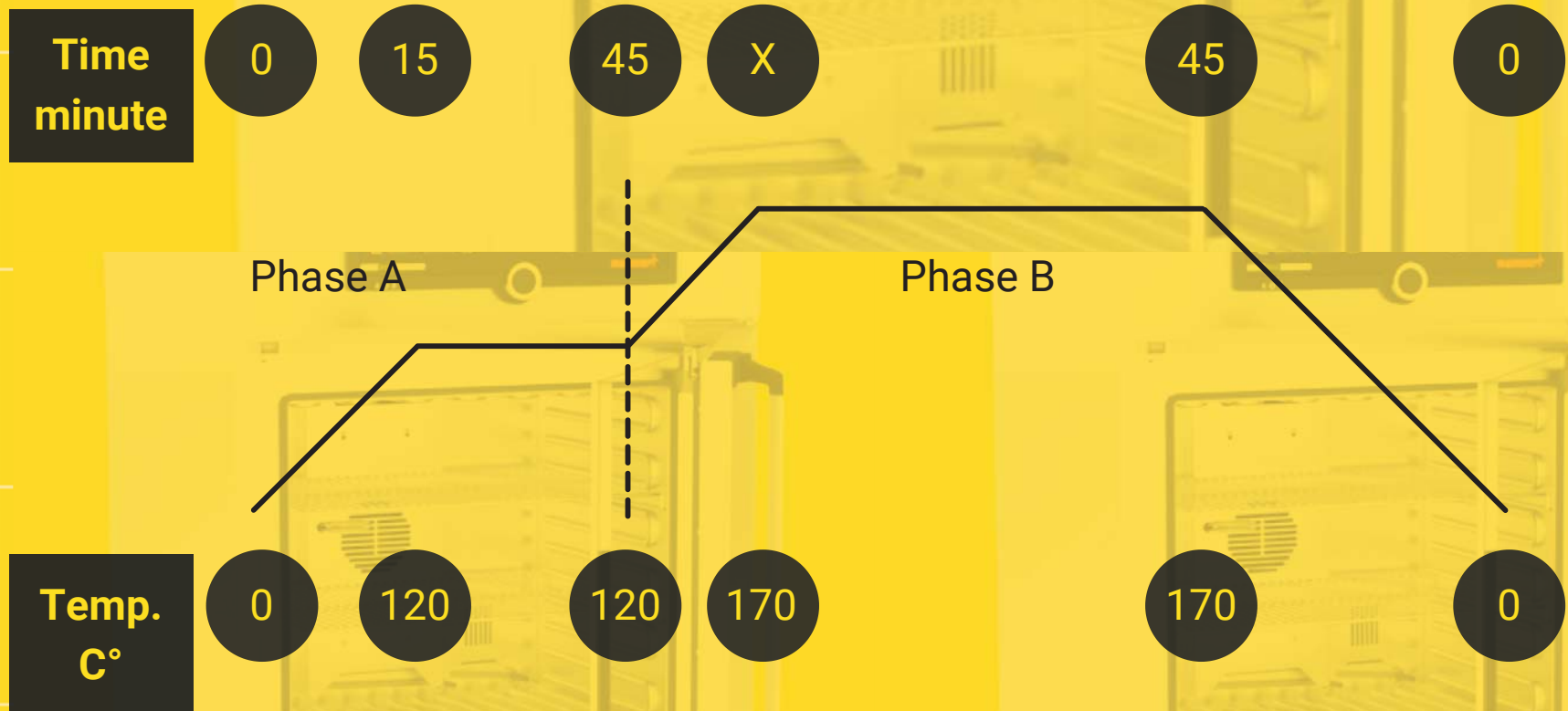
To obtain an honogeneous crystallization it's better use a vented heated chamber, check the temperaturee with an external thermometer

VERY IMPORTANT !

When the printer have finish his printer cycle, make a gradually decrease of the temperature inside the printer chamber, the polymer have the right time to crystallize and reduce the tensions on item printed.



Best condition to aneal with oven





Note for oven

LOW THICKNESS ITEM

For low thickness items, < 1 mm, place the item inside a metal box full of sand or salt, it's necessary to not produce deformation, than place the box inside the oven.

PHASE A

In the phase A, place inside the oven when it's cold, then activate the heating cycle, 120°C for 45 minute.
It's necessary to reduce the tensions.

PHASE B

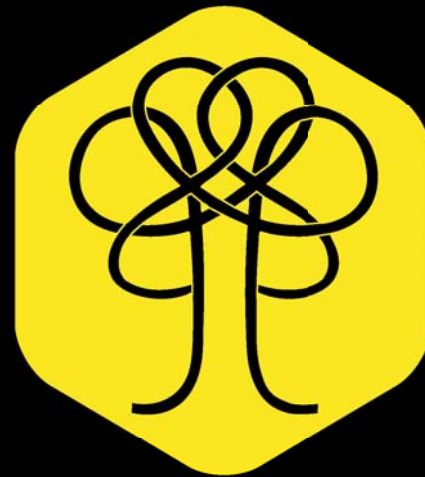
In the phase B start the crystallization, use the rule : **1 mm thickness - 1 hour** , not more than 6 hour is necessary.
Not pass 180°C.

VERY IMPORTANT !

Never open the oven before the end of the cycle, if it the thermal shock damage the item !

TREEDFILAMENTS

FOR ANY OTHER QUESTION :
team@treedfilaments.com



TREED