



3DXTECH
Additive Manufacturing

Filament Drying Recommendations for 3DXTECH materials

We receive many questions from customers asking what temps they can dry the filament when it eventually gets wet. We put this chart together to assist our customers for when the filament needs to be dried out. Please also see the notes below the chart.

Filament Drying Recommendations		
Material	Max Drying Temp (°C)	Duration (Hours)
PEKK	120	4
PEEK	120	4
PEI	120	4
PPSU	120	4
PSU	120	4
PPS	110	4
PVDF	Drying not needed	
PC	120	4
PC/ABS	110	4
PC/ASA	110	4
NYLON	90	4
FLEX TPC	65	4
PETG	65	2-4
ASA	80	2-4
ABS	80	2-4
PLA	65	2-4
HIPS	Drying not needed	
Aquatek WSS Support	65	2-4
High Temp Break Away Support	120	4

Max drying temp: Important - this temperature should not be exceeded without risking the deformation of the filament, reel, or both.

Drying duration: This of course depends on how wet the material is. If it has been sitting out for several weeks or months, then you may need to dry it longer to drive out the moisture. High-temp materials like PEKK, PEEK, and PEI may need to be dried longer since they are slow to pick up moisture, but also slow to give moisture up when drying.

Drying Nylon: Anyone who prints with nylon knows how fast it can pick up moisture and what this does to the quality of your printing. We recommend 90°C and at least 4 hours to dry nylon, but this is a starting point. Saturated nylon may take 24+ hours to dry enough to make decent prints. Keep the material in a dry place while printing and between print jobs to make drying easier.

Over-drying Nylon: One thing to note is that over-drying nylon can be more difficult to dry and handle. Nylon actually likes a little bit of moisture in it or it will be brittle and more difficult to process. Printing with nylon is so much fun!

Vacuum oven: The use of a vacuum oven is of course helpful, but not necessary. Any oven that heats the filament up to the recommended temp is generally suitable. There are several filament 'dryers' on the market (Printdry, ebox), but even a simple toaster oven can dry the filament between uses.

Ventilation: It's always a great idea to make sure you have proper ventilation in your printing environment - whether during printing or drying filament - to assure good air quality while processing these plastic materials.

Smoke and Fire Detection: Please make sure you have a smoke detector in any environment where you are printing. You are processing plastic materials and many of them are flammable and all exude some vapours during printing.

Questions? Please email us at enquiries@3dfilaprint.com if you have any questions.