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Making It Better

Filatech Filaments – Build Plate Recommendations & Precautions

Legend:

PEI | PET | PEY/PEO | G10 | Cooldown | Release layer | Enclosure | ↕ Increase Z-gap | Brim | Dry filament | Slow Printing

Filament	Recommended Surface	Alternative Surface	Bed Temp (°C)	Precautions
PLA/PLA+/WPLA/ FilaCarbon PLA	PEY / PEO	PEI	50–60	
ABS / FilaCarbon ABS	Smooth PEI	Textured PEI	~100	
ASA	Smooth PEI	Textured PEI	~90	
PETG/ FilaCarbon PETG	Textured PEI	PET / Smooth PEI	70–85	
HIPS	Smooth PEI	Textured PEI	90–110	
PA/FilaCarbon PA	G10 / Garolite	PA-coated	70–90	
PC	G10 / PC-coated	Smooth PEI	90–110	
TPU/TPU+/TPE	Textured PEI	PET / Smooth PEI	30–50	↕
FilaFlexible30	PET	Smooth PEI	35–50	↕
FilaFlexible40	PET	Smooth PEI	35–50	↕
FilaFlex55 / FilaTough	Textured PEI	PET	40–55	

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Notes – General Considerations

1. To get the best bed adhesion and release, choose the best compatible bed surface material for your filaments.
2. Depending to the design of your part and setup of your printer you many need to tweak the bed temperature to achieve the optimum result.
3. PEI (Standard Bed Surface That Comes With The Printer) surfaces provide high adhesion and temperature resistance.
4. PET, PEY, and PEO surfaces offer easier release and are optimized for PLA and flexible materials.
5. G10 / Garolite plates are required for high-warp engineering filaments.

Notes – Build Surface & Release Layer

1. What is a release layer?
A *release layer* is a thin, sacrificial coating applied on top of the build surface to prevent excessive adhesion and allow safe, damage-free part removal after printing.

2. When is a release layer required?
A release layer is recommended for filaments that bond very strongly to common bed surfaces (such as PEI or glass). Without it, parts may be difficult to remove and can damage the build surface.

3. Common release layer options:
- PVA glue stick (school glue type)
- Light coat of hairspray
- Dedicated 3D printing adhesives (e.g. Magigoo)
- Painter's tape or Kapton tape (where applicable)

4. How a release layer works:
Release layers provide controlled adhesion when the bed is hot and weaken after cooling, allowing parts to detach more easily.

5. Filaments that typically require a release layer:
- PETG
- TPU/TPU+/TPE
- FilaFlexible Filaments
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6. Filaments that usually do NOT require a release layer:
- PLA/PLA+/WPL
- ABS
- ASA
- HIPS

(For these materials, adhesion and warping control are usually more critical than part release.)

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7. Important notice:
A release layer is **not a lubricant** and should not be oily or greasy. Only use materials intended for 3D printing build surfaces.

Disclaimer:
Build surface behaviour may vary depending on printer model, bed condition, and ambient environment. Always perform a small test print when using a new material or surface.

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