

Thank you for supporting Tiny Machines 3D and congratulations on purchasing one of the finest build surfaces available. Below are some guidelines for having a pleasant experience. To see the most updated version of this doc, go to:

<https://bit.ly/TMFLEXGUIDE>



*this doc*



*video*

 **TM-FLEX Install**

pg 1. [General info and Smooth PEI](#)

pg 2. [Powder-Coated \(textured\)](#)

### Magnet Notes (applies to all surface types)

- **Check size and fit before applying.** In some cases, the adhesive is not applied to the entire magnet, but the magnets are oversized. Position the magnet so the adhesive is centered over the surface and the hot bed is fully covered. Also note orientation. For example, 320x310 kits have an oblong shape. Ensure the longer side is matched to the Y direction of the plate.

## PEI (Smooth Side) Use

### Surface Notes - Smooth PEI

The plate has a soft surface so be gentle with it. Scratches or gouges from the nozzle are not covered under warranty. If you experience any other issues, you can contact us at [support@tinymachines3d.com](mailto:support@tinymachines3d.com). Please include your order number.

### Cleaning Suggestions

- Microfiber towels work well
- 90% and higher Isopropyl Alcohol (IPA)
  - Best choice
- Windex
  - OK but not as strong as IPA
- Warm water, 2-3 drops of dish soap
  - Use if IPA/Windex doesn't remove residue on the sheet
- Acetone
  - Use only once in a while to freshen the sheet

### Important Notes

- **Do not use a metal scraper! Plastic razor blades are suggested**
- **Use Windex when printing with PETG**
- **Use glue stick when printing flexibles**
  - **Purple Glue Stick is our choice**
- **IPA + PETG will create a very strong bond to the surface. Part removal may be extremely difficult. PETG may also require a thin film of glue stick.**

## Temperature Suggestions

For nozzle temperatures, follow filament manufacturer suggested settings. Make sure your machine can handle the temperatures required before attempting exotic materials. For larger objects, bed temperature may need to be increased over our suggestions below. Vision Miner Nano Polymer adhesive works great - it can be used for most materials.

- **PLA** 50-70°C -- Clean with IPA, no glue needed
- **Flex** 50-70°C -- Clean with IPA, glue stick required
- **ABS** 100-125°C -- Clean with IPA, no glue needed \*\*some use ABS juice or glue stick
- **PC** 100-130°C -- Clean with IPA, glue stick suggested
- **Nylon** 90-120°C -- Clean with IPA, glue stick suggested
- **PP** 100-130°C (120°C is suggested) -- Clean with IPA, apply scotch tape to surface
- **PETG** 75-95°C -- Clean with Windex, glue stick required
- **Maximum Suggested Bed Temperature: 130°C**

# Powder Coated (Textured Side) Use

## Surface Notes (Textured Side)

- The plate has a textured surface, so it is more durable than the smooth PEI. Since the surface is rough, it is necessary to lower your Z Offset (nozzle to bed height), so the plastic can be pressed into the texture. Scratches or gouges from the nozzle are not covered under warranty. If you experience any other issues, you can contact us at [support@tinymachines3d.com](mailto:support@tinymachines3d.com). Please include your order number.

### Cleaning Suggestions

- Microfiber towels work well
- 90% and higher Isopropyl Alcohol (IPA)
  - Best choice
- Warm water, 2-3 drops of dish soap
  - Use if IPA/Windex doesn't remove residue on the sheet
- Acetone
  - NEVER

### Important Notes

- Z Offset (nozzle to bed height) will be closer than with smooth surfaces
- Do not use a metal scraper! Plastic razor blades are suggested
- If a print is embedded, Z Offset (nozzle to bed height) should be increased and same .GCODE can be ran (first few layers) to make removal easier.

## Temperature Suggestions

For nozzle temperatures, follow filament manufacturer suggested settings. Make sure your machine can handle the temperatures required before attempting exotic materials. For larger objects, bed temperature may need to be increased over our suggestions below. Vision Miner Nano Polymer adhesive works great - it can be used for most materials.

- **PLA** 50-70°C -- Clean with IPA, no glue needed
- **Flex** 50-70°C -- Clean with IPA, glue stick suggested
- **ABS** 100-125°C -- Clean with IPA, glue stick for larger prints
- **PC** 100-130°C -- Clean with IPA, glue stick suggested
- **Nylon** 90-120°C -- Clean with IPA, glue stick suggested
- **PP** 100-130°C (120°C is suggested) -- Clean with IPA, apply scotch tape to surface
- **PETG** 75-95°C -- Clean with IPA, no glue needed
- **Maximum Suggested Bed Temperature: 130°C**

For machines with clips attached to the hotbed like CR-10S Pro / CRX / CR-10 Max, the magnet will be applied to the hotbed and the clips do not need to be removed.

