

Material: iglidur® I180-PF / iglidur® I180-BL-PF

1. General

The material iglidur® I180-PF, developed by igus®, was developed and tested solely for the “Fused-Deposition-Modeling” (FDM) manufacturing method.

For beginners iglidur® I150 is the most preferred type, since it is the easiest Tribofilament to process.

2) Data for the processing

The optimum processing parameters depend on the various print parameters and on the 3D printers that are used. Therefore only ranges of values can be specified here (see the figure on page. 2):

- (1) Nozzle temperature: 250 - 260 °C
- (2) Bed temperature: 80 - 100 °C
- (3) Print speed: ~ 50 mm/s
- (4) Bottom layer speed: ~ 20 mm/s
- (5) Layer height: 0.1 to 0.3 mm
- (6) Shell-thickness (6.1) to nozzle-diameter (6.2) ratio: >1
- (7) Avoid cooling by fan
- (8) The enclosure of the printer is recommended
- (9) Recommended bed-surface:
 - igus® adhesive foil for the printing-bed
 - available in 203*203 mm; article-number: PF-01-0203-0203
 - available in 254*228 mm; article-number: PF-01-0254-0228
 - Perforated printing plates
 - “3D-Lac” on glass or carbon plates

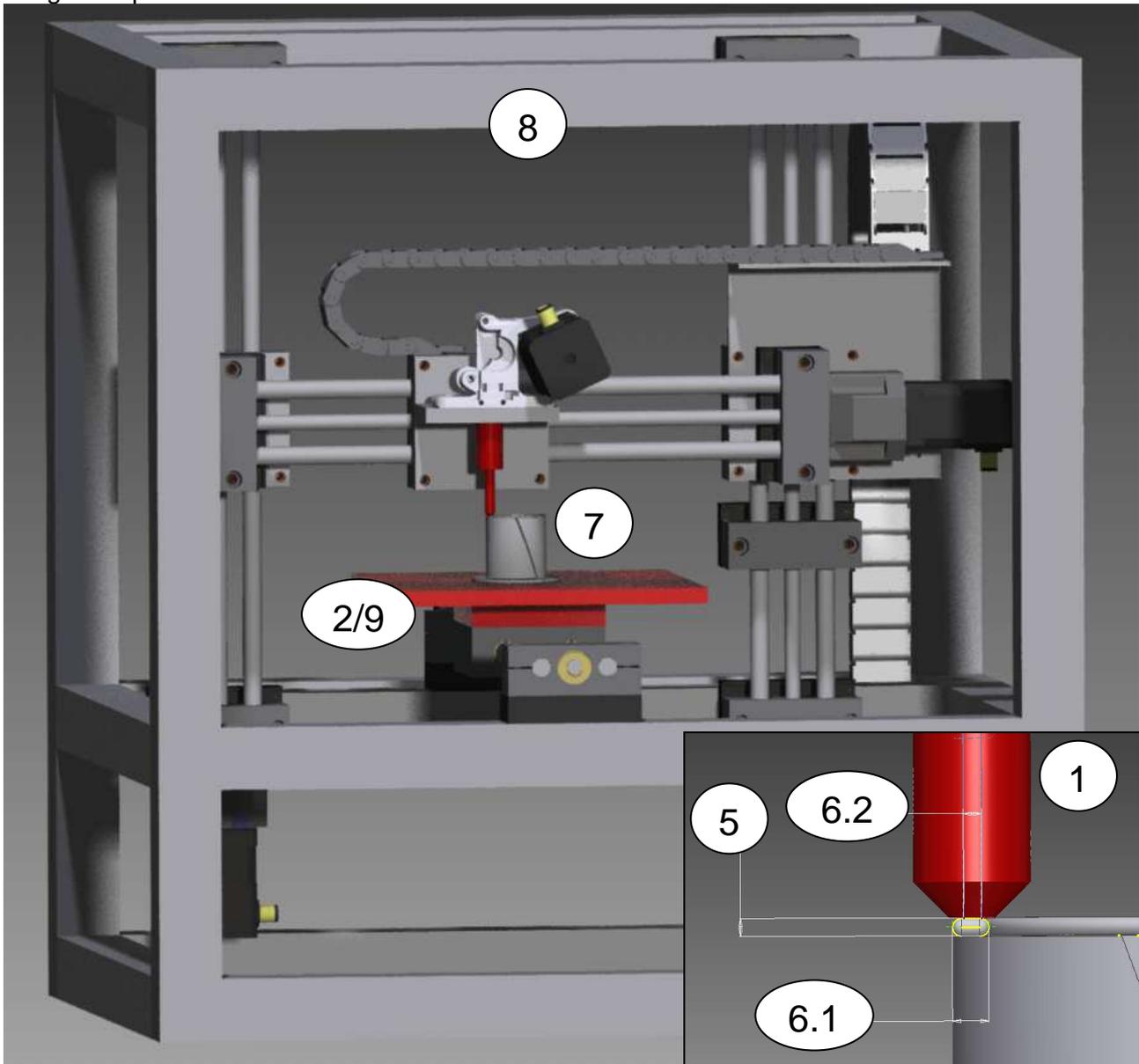
3) Further processing instructions:

Upon processing, a good ventilation of the room should always be ensured. Alternatively, suction systems or 3D-printers equipped with built-in filters can be used. In addition, appropriate protective equipment should be used when handling the hot molten mass.

The material should not be heated beyond 280 °C. When heated beyond 300 °C, hazardous decomposition products are generated.

Based on the supplier’s experience and the information provided by the supplier, the product has no adverse health effects if properly handled and used in accordance with the intended purpose.

Image: 3D-printer



4) FAQ

Where do I find the processing instructions for iglidur I180 tribofilament?

Following the link on our website: www.igus.eu/I180-PF-instructions

Do I need a heated bed (platform) on my printer?

Yes, for most of the tribofilament materials a heated bed is necessary, only Iglidur[®] I150 can be processed without heated buildplate (then igus adhesive film is needed).

Does igus[®] offer a filament diameter size of 2,85 mm?

The 3 mm filament is designed to be suitable for printers requiring 2,85 mm.

Where can I get the igus® adhesive foil for the printing-bed?

Following the link on our website: [http://www.igus.eu/Adhesive film for print bed](http://www.igus.eu/Adhesive_film_for_print_bed)

Which Tribofilament is the easiest to process?

Iglidur® I150 is by far the most easily to process tribofilament. It can even be processed without heated buildplate (then igus adhesive foil is necessary).

Iglidur® I180 is suited for more advanced users, because more conditions need to be considered (e.g. enclosed printer, switched off fan).

Iglidur® I170, Iglidur® J260, and Iglidur® C210 are suited for experts; since they are harder to process.

The printed part does not stick to the print bed, what can I do?

1. Check the distance between nozzle and print bed. Re-level the platform when necessary.
2. Did you use the correct printsurface? Is the printer enclosed? Check page 1, point 2
3. Increase bed-temperature
4. Try using “Brim“ as the adhesion type in your slicer software (normally used for large parts)

The adhesion between printbed and part is too high. How to reduce the adhesion?

Reduce the print-bed-temperature.

Does a running fan (part-cooling) help with the print quality?

All iglidur tribofilaments are preferably printed with switched off fan.

The layer adhesion or strength at my part is very bad. How can this be improved?

Make sure the fan is off (part cooling) and the printer is enclosed, so that the hot air stays inside the printer.