

Material: iglidur® I170-PF

1. General

The material iglidur® I170-PF, developed by igus®, was developed and tested solely for the “Fused-Deposition-Modeling” (FDM) manufacturing method. As such iglidur® I170-PF is more challenging to process than iglidur® I180-PF.

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: 240 - 260 °C
- (2) Bed temperature: 90 - 110 °C
- (3) Print speed: ~ 50 mm/s
- (4) Bottom layer speed: ~ 20 mm/s
- (5) Layer height: 0.2 to ~0.3 mm
- (6) Shell-thickness (6.1) to nozzle-diameter (6.2) ratio: ~2
- (7) Avoid cooling by fan
- (8) The enclosure of the printer in a case is advantageous
- (9) Bed-surface:
 - „Buildtak“ 3D-printing sheet (recommended)
 - Permanent printing plates
 - “3D-Lac” on glass or carbon plates
 - Blue-Tape stuck (e.g. Scotch 2090) glass and apply on it an adhesive (e.g. Pritt Power)

3) Further processing instructions:

When feeding the filament, the bends should not be too tight, i.e. the radius should not be less than 50 mm.

When it comes to slipping of the friction wheel, the retract (withdrawal) function in the settings of the "Slicer" should be reduced / turned off.

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

