

iGlide® I180-PF

Components made of igus® tribo-filament are up to 50 times more wear-resistant than standard materials for 3D printing and therefore have an extremely long service life. Due to their excellent tribological properties, they are suited for 3D printing of replacement parts for e.g., bearings, drive nuts, gears and other parts. This filament can be processed on 3D printers that are based on the fused-deposition-modelling method (FDM/FFF) and that allow the nozzle temperature to be set as required.

General Properties	Value	Unit
Density	1.21	g/cm ³
Saturation with moisture absorption at 23°C / 50% RH	0.3	weight %
Saturation with water	0.9	weight %
Mechanical Properties ³⁾	Value	Unit
Flexural Modulus	1000	MPa
Flexural Strength	44 / 33 ⁴⁾	MPa
Max permissible surface pressure at 20°C	30	MPa

1) Relaxation possible

2) Without additional load; no movement

3) Depends on printing parameters

4) Printed flat/ upright

Thermal Properties	Value	Unit
Highest long term service temperature ¹⁾	100 ¹⁾	°C
Highest short-term service temperature ^{1) 2)}	120	°C
Highest short term ambient temperature ^{1) 2)}	120	°C
Lowest service temperature	-40	°C
Electrical Properties ³⁾	Value	Unit
Specific Volume Resistivity	10 ¹²	Ω cm
Surface Resistivity	10 ¹¹	Ω

Characteristics

- High abrasion resistance
- Good mechanical properties
- Lubrication-free
- Silent operation and smooth sliding
- Resistance to dirt
- Long service life
- Corrosion-resistant

Applications

- Prototype constructions
- Small batches
- Construction tests

Considerations

- The printed parts are not chemically affected by the chemicals outlined in the Chemical Resistance sheet, but their dimensions may change after moisture absorption.
- When heated above +300 °C, hazardous fumes are produced, therefore, good ventilation should be provided.

Printing Skill & Experience:

Beginner Intermediate Advanced Expert

Printer Compatibility

<input checked="" type="checkbox"/> 3ntr A2v4	<input checked="" type="checkbox"/> 3ntr A4v4	<input type="checkbox"/> EVO-T	<input type="checkbox"/> EVO22-T
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Available Colors from [TRAK](#):

White