

iglidur® i3, SLS material

I3-PL-10000



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- Highest wear resistance
- Well suited for sliding applications and gears

Product description

Introducing the iglidur® i3, a premium SLS material from igus®. This innovative material offers exceptional wear resistance, boasting a durability 3 to 30 times greater than conventional options. Perfect for sliding applications, gears, and components requiring high mechanical strength, the iglidur® i3 ensures accurate surface details and predictable gear service life. Ideal for projects where low friction and high wear resistance are essential, this material elevates your design freedom and performance.

Electricity attributes

Specific transitional resistance

Surface resistance > 10¹¹Ω

Physical properties

Thermal expansion coefficient (at 23°C/73°F)

12K⁻¹ 10⁻⁵, test method DIN 53752

Heat conductivity

0.14W/(m K), ASTM C 177 test method

General properties

Colour	yellow
Density	1.05 g/cm³
Max. moisture absorption	0.8 Wt.-%
Max. total moisture absorption	1.9 Wt.-%

Dynamic properties

Coefficient of sliding friction, dynamic, against Cf53 steel	0.2600
Coefficient of friction, dynamic, against 304 stainless steel	0.1800
pv value, max. (dry)	0.35MPa m/s
Max. recommended surface pressure	46 MPa



Thermal properties

Max. long-term application temperature	80 °C
Max. short-term application temperature	140 °C
Lower application temperature	-40 °C

Properties and approvals

Food industry	No
PFAS-tested	Yes
ESD compliant	No

Mechanical properties

Tensile strength printed flat	41 MPa
Tensile strength printed upright	36 MPa
Tensile modulus of elasticity	1800 MPa
Flexural strength printed flat	68 MPa
Flexural strength printed upright	61 MPa
Modulus of elasticity	1400 MPa
Shore D hardness	70.0000
Compressive strength	60 MPa

Certificates and standards

