

bar stock...

igus® solutions for prototypes



plastics for longer life® ... igus®
www.igus.com/barstock

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For free design



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high media
resistant, low cost
material



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Directive 10/2011



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material



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resistance



iglide® JB –
Extreme wear
resistance as plate
material



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and cost effective



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requirements



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the media-resistant
high-temperature
material

*The part number X is the European
equivalent of the T500 material
and the part number W300 is the European
equivalent of the L280 material

iglide® bar stock - Advantages

iglide® in one piece

Self-lubricating iglide® bar stock enables you to freely design all kinds of maintenance free sliding elements and bearings. The broad range of iglide® plain bearing materials enables you to match the bearing material with the best friction and wear values for the shaft.

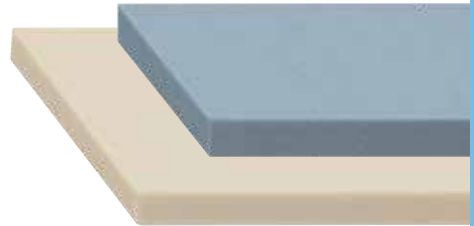
Over 20 iglide® materials are currently available for selection as round bar stock. Additional iglide® plain bearing materials will follow. Also available are iglide materials in the form of tubes and plates.

In addition to the bar stock for independent processing, we will also gladly produce plain bearings, sliding elements and pads in all forms. We can even provide urgent prototypes in a matter of days.

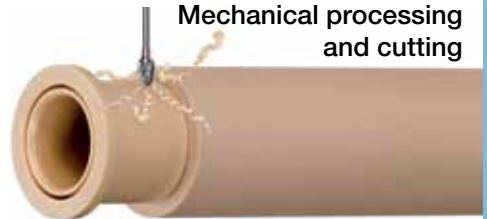
iglide® round bar stock



iglide® plates



iglide® tubes



Mechanical processing
and cutting



Service life calculation

► www.igus.com/barstock-expert



Temperature range:

-58°F (-50°C) up to 194°F (+90°C)

for standard iglide® J

-148°F (-100°C) up to 482°F (+250°C)

(depending on material)



igus® is constantly expanding its range of available materials and dimensions. Check the current stock online at:

► www.igus.com/barstock



Available from stock

Detailed information about delivery times can be found online. Further materials and dimensions on request.



20 plus materials

Round bars: Ø 10–100 mm

Plate thickness: ↓ 2–40 mm

Tubes: up to 150 mm outer Ø



In addition to bar stock, we will also gladly offer machining to print specifications.

Processing information for iglide® bar stock

General information for achieving the best possible results when processing iglide® bar stock:

- Use tools made of high-speed steels (HSS) and hard metal (HM)
- Always ensure the tools are extremely sharp and in perfect condition
- Due to greater thermal expansion compared to metals and the dimensional changes that occur as a result of moisture absorption, larger production tolerances are required for plastics than for metal parts
- If large material volumes are to be machined, interim tempering should be used before the refined finishing stage in order to reduce retrospective warping.

	Sawing	Turning	Milling	Drilling
Tool material	HM with alternate teeth or trapezoidal flat teeth	HSS	HSS	HSS
Clearance angle	5–30°	2–10°	2–30°	3–16°
Rake angle	0–15°	0–8°	0–15°	5–30°
Tooth pitch	2–14 mm	–	–	–
Setting angle	–	45–60°	–	–
Tip angle	–	–	–	90–130°
Cutting speed	max. 300 m/min.	100–500 m/min.	80–500 m/min.	20–200 m/min.
Feed rate	–	0.05–0.5 mm/rpm	0.02–0.3 mm/rpm	–

Table: General processing information

Tempering

Interim tempering reduces inner tensions caused by the machining process, and thus creates narrower tolerances. In the end, the optimum values depend on the volume of material machined, the machining parameters and the geometric design of the end product, which should be determined by tests.

As the plastic has low thermal conductivity, the plastic bar stock has to be heated slowly.

When possible, the entire bar stock should be evenly heated. Therefore, it is important to achieve the appropriate temperatures for material tempering indicated below over a period of 3 – 4 hours by slowly heating the part from room temperature. Depending on the thickness of the part, this temperature should be maintained for 1 hour per cm of wall thickness.

If the machined part cools too quickly, tension can once again be induced. This is avoided by using a slow cooling process with a maximum reduction of 68°F (20 °C) per hour until room temperature is reached.

Tempering temperatures	iglide® materials
248°F (+120 °C)	A180, A181, J, J2, M250 J3, J4, J200, R
266°F (+130 °C)	J260
356°F (+180 °C)	F2, P210, T220, L280
392°F (+200 °C)	A350, H1, J350
428°F (+220 °C)	T500 ¹¹¹⁾

¹¹¹⁾ In the case of iglide® T500, the 428°F (220 °C) per cm of wall thickness must be maintained for 2 hours.

iglide® bar stock - Product range



iglide® bar stock from stock

The range of iglide® bar stock products is growing continue! iglide® bar stock products bridge the gap between initial test samples and the injection-molded parts for large volume. Ideal for special solutions and small-series requirements as well.

Ø	10	15	20	25	30	35	40	45	50	55	60	65	80	100
iglide®														
A160			•	•	•		•		•					
A180	•		•		•		•		•		•		•	•
A181					•	•	•	•	•					
A350	•	•	•	•	•	•	•	•	•	•	•	•	•	
A500			•		•		•		•					
C500		•	•						•		•			
F2					•									
H1					•			•						
HSD350					•									
J	•	•	•	•	•	•	•	•	•	•	•	•	•	•
JB			•		•		•		•		•			
J2					•									
J3		•	•		•		•				•			
J4		•	•	•	•	•	•	•	•	•	•	•		
J200					•									
J260					•						•			
J350				•	•	•		•			•		•	
M250					•		•				•			
P210			•		•		•	•	•	•	•		•	
R					•		•		•		•	•		
T220					•		•		•		•			
UW160					•									
L280 (W300)*					•		•		•		•	•	•	
T500 (X)*		•	•	•	•	•	•	•	•	•	•	•		

*The part number X is the European equivalent of the T500 material and the part number W300 is the European equivalent of the L280 material

iglide® bar stock - Processing information



iglide® A160

High media-resistant,
low cost material



iglide® A180

General purpose for medical and food
industry (FDA compliant)



iglide® A181

The food grade material, compliant
with FDA specifications and EC
Directive 10/2011 EC

Material properties table

General properties	Unit	iglide® A160	iglide® A180	iglide® A181
Density	g/cm ³	1.00	1.46	1.38
Color		blue	white	blue
Max. moisture absorption at +73°F/50% r.h.	% weight	0.1	0.2	0.2
Max. water absorption	% weight	0.1	1.3	1.3
Coefficient of sliding friction, dynamic against steel	μ	0.09–0.19	0.05–0.23	0.10–0.21
pv value, max. (dry)	psi · ft/min	7,800	8,750	8,750
Mechanical properties				
Modulus of elasticity	psi	166,938	333,600	277,457
Tensile strength at +68°F	psi	2,755	12,760	6,961
Compressive strength	psi	5,366	11,310	8,700
Max. recommended surface pressure (+68°F)	psi	2,175	4,060	4,496
Shore-D Hardness		60	76	76
Physical and thermal properties				
Max. long term application temperature	°F	+194	+194	+194
Max. short term application temperature	°F	+212	+230	+230
Min. application temperature	°F	-58	-58	-58
Thermal conductivity	W/m · K	0.30	0.25	0.25
Coefficient of thermal expansion (at +73°F)	K ⁻¹ · 10 ⁻⁶	11	11	11
Electrical properties				
Specific volume resistance	Ωcm	> 10 ¹²	> 10 ¹²	> 10 ¹²
Surface resistance	Ω	> 10 ¹²	> 10 ¹¹	> 10 ¹²

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® A160		
30	100 to 1,000	SA160-30
iglide® A180		
10	100 to 1,000	SA180-10
20	100 to 1,000	SA180-20
30	100 to 1,000	SA180-30
40	100 to 1,000	SA180-40
50	100 to 1,000	SA180-50
60	100 to 1,000	SA180-60
80	100 to 1,000	SA180-80
100	100 to 1,000	SA180-100

Ø	Lengths ¹⁶⁾	Part No.
iglide® A181		
25	100 to 1,000	SA181-25
30	100 to 1,000	SA181-30
35	100 to 1,000	SA181-35
40	100 to 1,000	SA181-40
45	100 to 1,000	SA181-45
50	100 to 1,000	SA181-50



Order key
for round bars

Type	Dimensions
S	A160-30-500



Order key
for plates

Type	Dimensions
A350 P	500 610 15

¹⁶⁾ Minimum length 100 mm -
maximum length 1 m



iglide® bar stock - Product range



iglide® A350

Temperature resistant, FDA-compliant

Material properties table

General properties	Unit	iglide® A350
Density	g/cm ³	1.42
Color		blue
Max. moisture absorption at +73°F/50% r.h.	% weight	0.6
Max. water absorption	% weight	1.9
Coefficient of sliding friction, dynamic against steel	μ	0.10–0.20
pv value, max. (dry)	psi · ft/min	11,500
Mechanical properties		
Modulus of elasticity	psi	290,075
Tensile strength at +68°F	psi	15,950
Compressive strength	psi	11,312
Max. recommended surface pressure (+68 °F)	psi	8,700
Shore-D Hardness		76
Physical and thermal properties		
Max. long term application temperature	°F	+356
Max. short term application temperature	°F	+410
Min. application temperature	°F	-148
Thermal conductivity	W/m · K	0.24
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	8
Electrical properties		
Specific volume resistance	Ωcm	> 10 ¹¹
Surface resistance	Ω	> 10 ¹¹

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.	Ø	Lengths ¹⁶⁾	Part No.
	iglide® A350		40	100 to 1,000	SA350-40
			45	100 to 1,000	SA350-45
10	100 to 1,000	SA350-10	50	100 to 1,000	SA350-50
15	100 to 1,000	SA350-15	55	100 to 1,000	SA350-55
20	100 to 1,000	SA350-20	60	100 to 1,000	SA350-60
25	100 to 1,000	SA350-25	65	100 to 1,000	SA350-65
30	100 to 1,000	SA350-30	80	100 to 1,000	SA350-80
35	100 to 1,000	SA350-35			

¹⁶⁾ Minimum length 100 mm - maximum length 1 m

Dimensions (mm) – iglide® A350 as plate material

Material thickness	Tolerance	Dimensions	Part No. for plates
15	+0.300 +1.500	1,000 x 610	A350P100061015
15	+0.300 +1.500	500 x 610	A350P50061015
15	+0.300 +1.500	500 x 300	A350P50030015
20	+0.300 +1.500	1,000 x 610	A350P100061020
20	+0.300 +1.500	500 x 610	A350P50061020
20	+0.300 +1.500	500 x 300	A350P50030020
25	+0.300 +1.500	1,000 x 610	A350P100061025
25	+0.300 +1.500	500 x 610	A350P50061025
25	+0.300 +1.500	500 x 300	A350P50030025

iglide® bar stock - Product range



iglide® A500
FDA compliant up to 482°F



iglide® C500
Extremely media resistant.
Temperatures up to 482°F

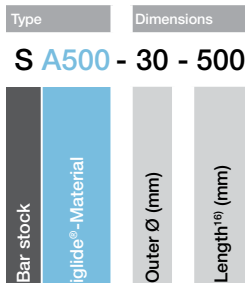
Material properties table			
General properties	Unit	iglide® A500	iglide® C500
Density	g/cm ³	1.28	1.37
Color		brown	magenta
Max. moisture absorption at +73°F/50% r.h.	% weight	0.3	0.3
Max. water absorption	% weight	0.5	0.5
Coefficient of sliding friction, dynamic against steel	μ	0.26–0.41	0.07–0.19
pv value, max. (dry)	psi · ft/min	8,000	19,500
Mechanical properties			
Modulus of elasticity	psi	522,100	435,110
Tensile strength at +68°F	psi	20,310	14,500
Compressive strength	psi	17,110	15,950
Max. recommended surface pressure (+68 °F)	psi	17,400	15,950
Shore-D Hardness		83	81
Physical and thermal properties			
Max. long term application temperature	°F	+482	+482
Max. short term application temperature	°F	+572	+572
Min. application temperature	°F	-148	-148
Thermal conductivity	W/m · K	0.24	0.24
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	9	9
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹⁴	> 10 ¹⁴
Surface resistance	Ω	> 10 ¹³	> 10 ¹³

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® A500		
20	100 to 1,000	SA500-20
30	100 to 1,000	SA500-30
40	100 to 1,000	SA500-40
50	100 to 1,000	SA500-50

Ø	Lengths ¹⁶⁾	Part No.
iglide® C500		
15	100 to 1,000	SC500-15
20	100 to 1,000	SC500-20
50	100 to 1,000	SC500-50
60	100 to 1,000	SC500-60

Order key for round bars



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range



iglide® F2

Used to prevent electrostatic charges



iglide® H1

For special plain bearings and bearing elements under extreme conditions



iglide® HSD350

For special plain bearings and bearing elements under extreme conditions

Material properties table

General properties	Unit	iglide® F2	iglide® H1	iglide® HSD350
Density	g/cm ³	1.52	1.53	1.46
Color		black	cream	beige
Max. moisture absorption at +73°F/50% r.h.	% weight	0.2	0.1	0.6
Max. water absorption	% weight	0.4	0.3	Not specified
Coefficient of sliding friction, dynamic against steel	μ	0.16–0.22	0.06–0.20	Not specified
pv value, max. (dry)	psi · ft/min	8,750	28,800	Not specified
Mechanical properties				
Modulus of elasticity	psi	1,075,890	406,100	67
Tensile strength at +68°F	psi	13,488	7,977	Not specified
Compressive strength	psi	8,847	11,310	Not specified
Max. recommended surface pressure (+68 °F)	psi	6,815	11,600	30 mpa
Shore-D Hardness		72	77	Not specified
Physical and thermal properties				
Max. long term application temperature	°F	+248	+392	+356°F
Max. short term application temperature	°F	+329	+464	+410°F
Min. application temperature	°F	-40	-40	-40°F
Thermal conductivity	W/m · K	0.61	0.24	Not specified
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	5	6	Not specified
Electrical properties				
Specific volume resistance	Ωcm	< 10 ⁹	> 10 ¹²	< 10 ¹³
Surface resistance	Ω	< 10 ⁹	> 10 ¹¹	< 10 ¹⁴

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
	iglide® F2	
30	100 to 1,000	SF2-30

Ø	Lengths ¹⁶⁾	Part No.
	iglide® H1	
30	100 to 1,000	SH1-30
45	100 to 1,000	SH1-45

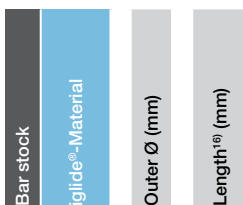


Order key for round bars

Type

Dimensions

S F2 - 30 - 500



Ø	Lengths ¹⁶⁾	Part No.
	iglide® HSD350	
30	100 to 1,000	SH1-30

¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range




iglide® J

The general purpose solution with optimum wear resistance and outstanding efficiency

Material properties table

General properties	Unit	iglide® J
Density	g/cm ³	1.49
Color		yellow
Max. moisture absorption at +73°F/50% r.h.	% weight	0.3
Max. water absorption	% weight	1.3
Coefficient of sliding friction, dynamic against steel	μ	0.06–0.18
pv value, max. (dry)	psi · ft/min	0.34
Mechanical properties		
Modulus of elasticity	psi	348,090
Tensile strength at +68°F	psi	10,590
Compressive strength	psi	8,700
Max. recommended surface pressure (+68 °F)	psi	5,075
Shore-D Hardness		74
Physical and thermal properties		
Max. long term application temperature	°F	+194
Max. short term application temperature	°F	+248
Min. application temperature	°F	-58
Thermal conductivity	W/m · K	0.25
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	10
Electrical properties		
Specific volume resistance	Ωcm	> 10 ¹³
Surface resistance	Ω	> 10 ¹²



Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
 iglide® J		
10	100 to 1,000	SJ-10
15	100 to 1,000	SJ-15
20	100 to 1,000	SJ-20
30	100 to 1,000	SJ-30





Ø	Lengths ¹⁶⁾	Part No.
35	100 to 1,000	SJ-35
40	100 to 1,000	SJ-40
50	100 to 1,000	SJ-50
60	100 to 1,000	SJ-60
65	100 to 1,000	SJ-65
80	100 to 1,000	SJ-80
100	100 to 1,000	SJ-100

¹⁶⁾ Minimum length 100 mm - maximum length 1 m



Order key for round bars

Type	Dimensions
S J	- 30 - 500
	
Outer Ø (mm)	Length¹⁶⁾ (mm)

Order key for tubes

Type	Dimensions
S T - J	- 150 500
	
	
Outer Ø (mm)	Length¹⁶⁾ (mm)

Order key for plates

Type	Dimensions
J P	500 610 15
	
Length (mm)	Width (mm)
Material thickness (mm)	

iglide® bar stock - Product range



Dimensions (mm) – iglide® J in larger diameters as a tube

Inner Ø	ID-Tolerance	Outer Ø	OD-Tolerance	Length ¹⁶⁾	Part No.
70	-2.0 / -6.5	110	+1.5 / +4.5	100 to 1,000	ST-J-11070
70	-2.0 / -6.5	125	+1.5 / -2.0	100 to 1,000	ST-J-12570
100	-2.0 / -6.5	150	+1.5 / +4.5	100 to 1,000	ST-J-150100

¹⁶⁾ Minimum length 100 mm - maximum length 1 m



Dimensions (mm) – iglide® J as plate material

Material thickness	Tolerance	Dimensions	Part No.
2	+0.000 +0.200	1,000 x 1,000	JP1000100002
2	+0.000 +0.200	1,000 x 500	JP1000500002
2	+0.000 +0.200	500 x 500	JP500500002
2	+0.000 +0.200	500 x 240	JP50024002
4	+0.000 +0.250	1,000 x 1,000	JP1000100004
4	+0.000 +0.250	1,000 x 500	JP1000500004
4	+0.000 +0.250	500 x 500	JP500500004
4	+0.000 +0.250	500 x 240	JP50024004
6	+0.000 +0.300	1,000 x 1,000	JP1000100006
6	+0.000 +0.300	1,000 x 500	JP1000500006
6	+0.000 +0.300	500 x 500	JP500500006
6	+0.000 +0.300	500 x 240	JP50024006
10	+0.200 +0.900	1,000 x 610	JP100061010
10	+0.200 +0.900	500 x 610	JP50061010
10	+0.200 +0.900	500 x 300	JP50030010
15	+0.300 +1.500	1,000 x 610	JP100061015
15	+0.300 +1.500	500 x 610	JP50061015
15	+0.300 +1.500	500 x 300	JP50030015
20	+0.300 +1.500	1,000 x 610	JP100061020
20	+0.300 +1.500	500 x 610	JP50061020
20	+0.300 +1.500	500 x 300	JP50030020
25	+0.300 +1.500	1,000 x 610	JP100061025
25	+0.300 +1.500	500 x 610	JP50061025
25	+0.300 +1.500	500 x 300	JP50030025
30	+0.300 +1.500	1,000 x 610	JP100061030
30	+0.300 +1.500	500 x 610	JP50061030
30	+0.300 +1.500	500 x 300	JP50030030
40	+0.300 +1.500	1,000 x 610	JP100061040
40	+0.300 +1.500	500 x 610	JP50061040
40	+0.300 +1.500	500 x 300	JP50030040

iglide® bar stock - Product range




iglide® JB

Extreme wear resistance and self-lubricating. Due to its color it is perfect for manufacturing parts that are visible

Material properties table

General properties	Unit	iglide® JB
Density	g/cm ³	1.49
Color		black
Max. moisture absorption at +73 °F/50% r.h.	% weight	0.3
Max. water absorption	% weight	1.3
Coefficient of sliding friction, dynamic against steel	μ	0.06-0.18
pv value, max. (dry)	psi · ft/min	0.34
Mechanical properties		
Modulus of elasticity	psi	348,090
Tensile strength at +68 °F	psi	10,590
Compressive strength	psi	8,702
Max. recommended surface pressure (+68 °F)	psi	5,075
Shore-D Hardness		74
Physical and thermal properties		
Max. long term application temperature	°F	+194
Max. short term application temperature	°F	+248
Min. application temperature	°F	-58
Thermal conductivity	W/m · K	0.25
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	10
Electrical properties		
Specific volume resistance	Ωcm	> 10 ¹³
Surface resistance	Ω	> 10 ¹²

Dimensions (mm)

∅	Lengths ¹⁶⁾	Part No.
	iglide® JB	
20	100 to 1,000	SJB-20
30	100 to 1,000	SJB-30
40	100 to 1,000	SJB-40
50	100 to 1,000	SJB-50
60	100 to 1,000	SJB-60



Dimensions (mm) – iglide® JB as plate material

Material thickness	Tolerance	Dimensions	Part No.
10	+0.200 +0.900	1,000 x 610	JBP100061010
10	+0.200 +0.900	500 x 610	JBP50061010
10	+0.200 +0.900	500 x 300	JBP50030010
25	+0.300 +1.500	1,000 x 610	JBP100061025
25	+0.300 +1.500	500 x 610	JBP50061025
25	+0.300 +1.500	500 x 300	JBP50030025

Order key for round bars

Type Dimensions

S JB - 30 - 500



Order key for plates

Type Dimensions

JB P 500 610 25



iglide® bar stock - Product range



iglide® J2
Versatile and cost-effective



iglide® J3
High service life, low coefficients of friction

Material properties table

General properties	Unit	iglide® J2	iglide® J3
Density	g/cm ³	1.44	1.42
Color		light yellow	yellow
Max. moisture absorption at +73°F/50% r.h.	% weight	0.2	0.3
Max. water absorption	% weight	1.3	1.3
Coefficient of sliding friction, dynamic against steel	μ	0.11–0.27	0.06–0.20
pv value, max. (dry)	psi · ft/min	6,600	14,000
Mechanical properties			
Modulus of elasticity	psi	522,860	391,600
Tensile strength at +68°F	psi	14,648	10,150
Compressive strength	psi	11,167	8,702
Max. recommended surface pressure (+68°F)	psi	6,670	6,527
Shore-D Hardness		Not specified	73
Physical and thermal properties			
Max. long term application temperature	°F	+194	+194
Max. short term application temperature	°F	+230	+248
Min. application temperature	°F	-58	-58
Thermal conductivity	W/m · K	0.25	0.25
Coefficient of thermal expansion (at +73°F)	K ⁻¹ · 10 ⁻⁵	7	13
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹³	> 10 ¹²
Surface resistance	Ω	> 10 ¹²	> 10 ¹²

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® J2		
30	100 to 1,000	SJ2-30
iglide® J3		
15	100 to 1,000	SJ3-15
20	100 to 1,000	SJ3-20
30	100 to 1,000	SJ3-30
40	100 to 1,000	SJ3-40
50	100 to 1,000	SJ3-50
60	100 to 1,000	SJ3-60
50	100 to 1,000	SJ4-50
60	100 to 1,000	SJ4-60

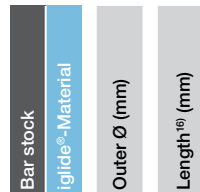


**Order key
for round bars**

Type

Dimensions

S J2 - 30 - 500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range

iglide® J4

Wear resistant and cost-effective

iglide® J200

Especially for aluminum shafts

Material properties table

General properties	Unit	iglide® J4	iglide® J200
Density	g/cm ³	1.48	1.72
Color		grey	dark gray
Max. moisture absorption at +73°F/50% r.h.	% weight	0.3	0.2
Max. water absorption	% weight	1.3	0.7
Coefficient of sliding friction, dynamic against steel	μ	0.06–0.20	0.11–0.17
pv value, max. (dry)	psi · ft/min	8,600	8,600
Mechanical properties			
Modulus of elasticity	psi	390,838	406,100
Tensile strength at +68°F	psi	10,152	8,412
Compressive strength	psi	7,975	6,237
Max. recommended surface pressure (+68 °F)	psi	5,075	3,336
Shore-D Hardness		74	70
Physical and thermal properties			
Max. long term application temperature	°F	+194	+194
Max. short term application temperature	°F	+248	+248
Min. application temperature	°F	-58	-58
Thermal conductivity	W/m · K	0.25	0.24
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	10	8
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹³	> 10 ⁹
Surface resistance	Ω	> 10 ¹²	> 10 ⁹

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® J4		
20	100 to 1,000	SJ4-20
25	100 to 1,000	SJ4-25
30	100 to 1,000	SJ4-30
40	100 to 1,000	SJ4-40
50	100 to 1,000	SJ4-50
60	100 to 1,000	SJ4-60

Ø	Lengths ¹⁶⁾	Part No.
iglide® J200		
30	100 to 1,000	SJ200-30

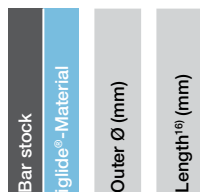


Order key for round bars

Type

Dimensions

S J4 - 30 - 500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range

 **iglide® J260**
Ideal for plastic shafts


 **iglide® J350**
For high temperatures

Material properties table

General properties	Unit	iglide® J260	iglide® J350
Density	g/cm ³	1.35	1.44
Color		yellow	yellow
Max. moisture absorption at +73°F/50% r.h.	% weight	0.2	0.3
Max. water absorption	% weight	0.4	1.6
Coefficient of sliding friction, dynamic against steel	μ	0.06–0.20	0.10–0.20
pv value, max. (dry)	psi · ft/min	10,000	13,000
Mechanical properties			
Modulus of elasticity	psi	319,100	290,100
Tensile strength at +68°F	psi	8,702	7,977
Compressive strength	psi	7,252	8,702
Max. recommended surface pressure (+68 °F)	psi	5,802	8,702
Shore-D Hardness		77	80
Physical and thermal properties			
Max. long term application temperature	°C	+248	+180
Max. short term application temperature	°C	+284	+428
Min. application temperature	°C	-148	-148
Thermal conductivity	W/m · K	0.24	0.24
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	13	7
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹²	> 10 ¹³
Surface resistance	Ω	> 10 ¹⁰	> 10 ¹⁰

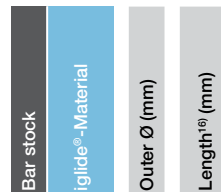
Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
 iglide® J260		
30	100 to 1,000	SJ260-30
 iglide® J350		
20	100 to 1,000	SJ350-20
25	100 to 1,000	SJ350-25
30	100 to 1,000	SJ350-30
35	100 to 1,000	SJ350-35
40	100 to 1,000	SJ350-40
45	100 to 1,000	SJ350-45
50	100 to 1,000	SJ350-50
55	100 to 1,000	SJ350-55
60	100 to 1,000	SJ350-60

 **Order key**
for round bars

Type Dimensions

S J260 - 30 - 500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range



iglide® P210

The material for high speeds at low loads



iglide® R

The low-cost material



iglide® M250

Vibration dampening

Material properties table				
General properties	Unit	iglide® P210	iglide® R	iglide® M250
Density	g/cm ³	1.40	1.39	1.14
Color		yellow	dark red	charcoal
Max. moisture absorption at +73°F/50% r.h.	% weight	0.3	0.2	1.4
Max. water absorption	% weight	0.5	1.1	7.6
Coefficient of sliding friction, dynamic against steel	μ	0.07–0.19	0.09–0.25	0.18–0.40
pv value, max. (dry)	psi · ft/min	11,500	8,700	3,400
Mechanical properties				
Modulus of elasticity	psi	362,594	282,800	391,600
Tensile strength at +68°F	psi	10,150	10,150	16,240
Compressive strength	psi	7,250	9,863	7,542
Max. recommended surface pressure (+68 °F)	psi	7,250	3,336	2,901
Shore-D Hardness		75	77	79
Physical and thermal properties				
Max. long term application temperature	°F	+212	+194	+176
Max. short term application temperature	°F	+320	+230	+338
Min. application temperature	°F	-40	-58	-40
Thermal conductivity	W/m · K	0.25	0.25	0.24
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	8	11	10
Electrical properties				
Specific volume resistance	Ωcm	> 10 ¹²	> 10 ¹²	> 10 ¹³
Surface resistance	Ω	> 10 ¹¹	> 10 ¹²	> 10 ¹¹

Dimensions (mm)

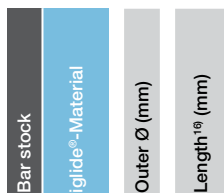
Ø	Lengths ¹⁶⁾	Part No.
iglide® P210		
20	100 to 1,000	SP210-20
30	100 to 1,000	SP210-30
40	100 to 1,000	SP210-40
50	100 to 1,000	SP210-50
60	100 to 1,000	SP210-60
80	100 to 1,000	SP210-80
iglide® R		
30	100 to 1,000	SR-30
40	100 to 1,000	SR-40
50	100 to 1,000	SR-50
60	100 to 1,000	SR-60
iglide® M250		
30	100 to 1,000	SM250-30
40	100 to 1,000	SM250-40



Order key for round bars

Type Dimensions

S P210-30-500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Product range



iglide® T220

For the tobacco industry



iglide® UW160

For continuous use in liquid media

Material properties table			
General properties	Unit	iglide® T220	iglide® UW160
Density	g/cm ³	1.28	1.04
Color		white	grey
Max. moisture absorption at +73°F/50% r.h.	% weight	0.3	0.1
Max. water absorption	% weight	0.5	0.1
Coefficient of sliding friction, dynamic against steel	μ	0.20–0.32	0.17–0.31
pv value, max. (dry)	psi · ft/min	8,000	6,250
Mechanical properties			
Modulus of elasticity	psi	261,100	195,655
Tensile strength at +68°F	psi	9,427	3,190
Compressive strength	psi	7,977	4,641
Max. recommended surface pressure (+68°F)	psi	5,802	2,175
Shore-D Hardness		76	60
Physical and thermal properties			
Max. long term application temperature	°F	+212	+194
Max. short term application temperature	°F	+320	+212
Min. application temperature	°F	-40	-58
Thermal conductivity	W/m · K	0.24	0.50
Coefficient of thermal expansion (at +73°F)	K ⁻¹ · 10 ⁻⁵	11	18
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹⁰	> 10 ¹²
Surface resistance	Ω	> 10 ¹⁰	> 10 ¹²

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® T220		
30	100 to 1,000	ST220-30
40	100 to 1,000	ST220-40
50	100 to 1,000	ST220-50
60	100 to 1,000	ST220-60
iglide® UW160		
30	100 to 1,000	SUW160-30

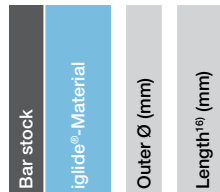


Order key for round bars

Type

Dimensions

S T220-30-500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

iglide® bar stock - Processing information



iglide® L280 (W300)*

The material for arduous requirements



iglide® T500 (X)*

The chemical resistant high-temperature material

Material properties table			
General properties	Unit	iglide® L280	iglide® T500
Density	g/cm ³	1.24	1.44
Color		yellow	black
Max. moisture absorption at +73°F/50% r.h.	% weight	1.3	0.1
Max. water absorption	% weight	6.5	0.5
Coefficient of sliding friction, dynamic against steel	μ	0.08–0.23	0.09–0.27
pv value, max. (dry)	psi · ft/min	6,600	37,700
Mechanical properties			
Modulus of elasticity	psi	507,600	1,174,800
Tensile strength at +68°F	psi	18,130	24,660
Compressive strength	psi	8,847	14,500
Max. recommended surface pressure (+68 °F)	psi	8,702	21,760
Shore-D Hardness		77	85
Physical and thermal properties			
Max. long term application temperature	°F	+194	+482
Max. short term application temperature	°F	+356	+599
Min. application temperature	°F	-40	-148
Thermal conductivity	W/m · K	0.24	0.6
Coefficient of thermal expansion (at +73 °F)	K ⁻¹ · 10 ⁻⁵	9	5
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹³	< 10 ⁵
Surface resistance	Ω	> 10 ¹²	< 10 ³

Dimensions (mm)

Ø	Lengths ¹⁶⁾	Part No.
iglide® L280 (W300)		
30	100 to 1,000	SL280-30
40	100 to 1,000	SL280-40
50	100 to 1,000	SL280-50
60	100 to 1,000	SL280-60
65	100 to 1,000	SL280-65
80	100 to 1,000	SL280-80

Ø	Lengths ¹⁶⁾	Part No.
iglide® T500 (X)		
15	100 to 1,000	ST500-15
20	100 to 1,000	ST500-20
25	100 to 1,000	ST500-25
30	100 to 1,000	ST500-30
35	100 to 1,000	ST500-30
40	100 to 1,000	ST500-30
45	100 to 1,000	ST500-30
50	100 to 1,000	ST500-30
55	100 to 1,000	ST500-30
60	100 to 1,000	ST500-30



**Order key
for round bars**

Type Dimensions

S L280-30-500



¹⁶⁾ Minimum length 100 mm - maximum length 1 m

*The part number X is the European equivalent of the T500 material and the part number W300 is the European equivalent of the L280 material

iglide® bar stock - Product range



Your requirements

<input checked="" type="checkbox"/> Minimum holding times in dry operation	<input checked="" type="checkbox"/> Low coefficient of friction	Max. operating pressure (bar/MPa)
<input checked="" type="checkbox"/> Oil resistant	<input checked="" type="checkbox"/> High resistance to chemicals	Operating temperature (°C)
<input checked="" type="checkbox"/> Vibration damping	<input checked="" type="checkbox"/> Good moldability	Lower application temperature (°C)
<input checked="" type="checkbox"/> Low moisture absorption	<input checked="" type="checkbox"/> Hydrolytic stability	
<input checked="" type="checkbox"/> FDA compatible FoodSafe	<input checked="" type="checkbox"/> Low outgassing	

iglide® materials selected for you:

iglide® material with low outgassing	iglide® material with low moisture absorption
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iglide® bar stock expert system

Measurement	Unit	Value	Unit	Value
Load	kg	1000	kg	1000
Type of motion		linear		linear
Speed	mm/s	100	mm/s	100
Temperature	°C	20	°C	20
Chemicals		none		none
Mating surface		metal		metal
Pressure	bar	10	bar	10
Maximum stroke	mm	100	mm	100
Acceleration	m/s²	10	m/s²	10
Start delay	s	0.1	s	0.1

Results

Material	iglide®
Material	iglide®
Material	iglide®
Material	iglide®
Material	iglide®

Quick inquiry

Tell us what material you want for your part made in, and upload a 3D model (preferably a STEP file)

Quantity:

3D model of your part

You can upload files up to a total volume about 10 MB

File 1	Uploaded
File 2	Uploaded
File 3	Uploaded
File 4	Uploaded
File 5	Uploaded



Find & compare semi-finished products

This material finder helps you find the right iglide® material for your project with a few clicks!

► www.igus.com/barstock-finder

Calculate lifetime of semi-finished products

Quick calculation of the service life of your iglide® semi-finished product.

speedicut – rapid special part production

speedicut is the mechanical production of iglide® bar stock in line with your drawings and specifications.

Before submitting an online request for the mechanical production of your desired geometric design, you can use the material finder or the service life calculation program to filter materials and find the right one for your application. If you would like our assistance in choosing the right material with the optimum friction and wear values, please do not hesitate to contact us.

We divide mechanical processing into two categories:

- Production of all custom geometric designs in the form of plain bearings, sliding elements and pads in line with your drawing and with the standard tolerances for plastics.
- Production of iglide® plain bearings and thrust washers in custom dimensions in line with igus® standard tolerances. You do not need to create a drawing for this type of processing.

Speed: if required, we are able to produce small quantities within a matter of days. If you need prototypes for your urgent projects extremely quickly, please contact us.

Depending on their complexity and precision, our rapid delivery service can supply parts with a delivery time of as little as 3 days.

9001:2008

igus® is certified in accordance with ISO 9001:2008 and ISO/TS 16949:2009 in the field of energy supply systems, cables and harnessing, as well as plastic bearings.



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