

PRODEC®

improved machinability bar

Marcegaglia Stainless Sheffield has developed highly improved machinability bars which carry the name Prodec®.

Prodec® grades have been specifically designed for consistent, superior machinability enabling faster machining speed, longer tool life and enhanced quality. Prodec® is melted, rolled and finished within the UK giving 100% European origin for the produced bars.

- Faster machining
- Longer tool life
- Superior quality - finished tolerance and surface
- European origin

Extensive technical knowledge and our end-to-end production chain enables us to optimize the material's machinability properties through all steps of the process. Unlike typical grades optimized for machinability, Prodec® products have similar corrosion resistance to conventionally produced stainless steel grades.



Round bar

Product	Dimension	Length	Tolerance
Cold drawn	6–25.4 mm	2.2–6 m	h9 & A484*
Cold drawn & Centerless ground	6–25.4 mm	2.2–6 m	h8*
Cold finished	28–90 mm	3 m or 6 m	h9 & A484 (ground polished)
Hot rolled & Peeled	28–90 mm	3 m or 6 m	k11 & A484

*Other tolerances available on request

Hexagon bar

Product	Dimension	Length	Condition
Cold drawn bar	8–25.4 mm	2.2–6 m	h11 & A484

Prodec® grades - stock availability:
303 (1.4305), 304/304L (1.4301/1.4307), 316/316L (1.4401/1.4404)

Non-Prodec® grades - mill quantities:
17-4, 17-7, A240, 1.4547, 305, 310, 314, 347, 320, 321, 304Cu, 316Cu, 2101, 2304, welding grades

Square bar

Product	Dimension	Length	Condition
Cold drawn bar	8–22.23 mm	2.2–6 m	h11 & A484

Manufacturing standard

Product	Dimension	Testing method	Standard
Round bar	All dimensions	Eddy current	EN 10277 Table 3 Class 3
Round bar	28–90 mm	Ultrasonic testing	EN 10308 Class 3*
Round bar	28–90 mm	Eddy current	EN 10277 Table 3 Class 2
Hexagon bar	17, 19, 22, 24 mm	Eddy current	EN 10277 Table 3 Class 2

*Excluding 1.4305/303 grades

Product designation

Stainless steel for general purposes

Supply conditions

- Dimensional tolerances according to EN 10278 or ASTM A484
- Corrosion testing to ASTM A262 Method E & EN ISO 3651-2 Method A on Prodec® 304, 316
- Upon request: certification according to AD 2000 W2/W10

Optional processing

- Centerless grinding
- Polishing (grit 240)
- Chamfering

Standard chamfering edges

Dimension	Depth at 45°
8–10 mm	1 mm
10–20 mm	1.2 mm
30–90 mm	1-3 mm



Round bar stock profile

Cold drawn bar h9 Prodec® L=3000 mm	Stock Profile		
	Ø 1.4305	Ø 1.4307	Ø 1.4404
6	x	x	x
6.35	x	x	x
7			
8	x	x	x
9			
9.53	x	x	x
10	x	x	x
11			
12	x	x	x
12.7	x	x	x
13	x	x	
14	x	x	x
15	x	x	x
15.88	x	x	x
16	x	x	x
17			
18	x	x	x
19			
19.05	x	x	x
20	x	x	x
21	x	x	x
22	x	x	x
22.23	x	x	x
23			
24	x	x	x
25	x	x	x
25.4	x	x	x

Peeled k11 Prodec® L=6000 mm	Stock Profile		
	Ø 1.4305	Ø 1.4307	Ø 1.4404
28	x	x	x
30	x	x	x
32	x	x	x
34			
35	x	x	x
36	x	x	x
38	x	x	x
40	x	x	x
42	x	x	
45	x	x	x
50	x	x	x
52	x	x	x
55	x	x	x
60	x	x	x
65	x	x	x
70	x	x	x
75	x	x	x
80	x	x	x
85	x	x	x
90	x	x	x

Cold finished h9 Prodec® L=3000 mm	Stock Profile		
	Ø 1.4305	Ø 1.4307	Ø 1.4404
28	x	x	x
30	x	x	x
32	x	x	x
34	x		
35	x	x	x
36	x	x	x
38	x	x	x
40	x	x	x
42	x	x	x
45	x	x	x
50	x	x	x
52	x	x	x
55	x	x	x
60	x	x	x
65	x	x	x
70	x	x	x
75	x	x	x
80	x	x	x

Peeled, a484 Prodec® L=3000 mm	Stock Profile		
	Ø 1.4305	Ø 1.4307	Ø 1.4404
38.1	x	x	x
41.28	x	x	x
44.45	x	x	x
50.8	x	x	x
57.15	x	x	x
60.33	x	x	x
63.5	x	x	x
69.85	x	x	x
76.2	x	x	x
82.55	x	x	x
88.9	x	x	x

Contact sales at sales.bar@stainless-marcegaglia.com

Ensuring quality with end-to-end production

Sheffield Stainless Bar



Melting shop

Consistently produced high quality semis are made at the SMACC melting shop.



Billet feedstock

Our rolling mill uses billet feedstock produced at the SMACC melting shop.



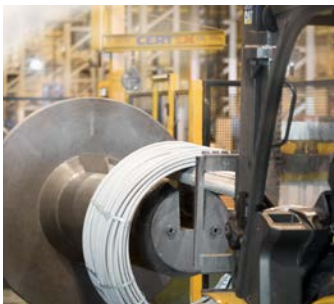
Hot rolling into wire rod

Rod coil feedstock is used for bar production at Sheffield Stainless Bar.



Coil pre-dipping

The surface of the bar is coated with a drawing lubricant to aid cold drawing.



Preparation for cold drawing

Rod coils are moved from the pre-dipping station to the cold drawing line.



Cold drawing

Wire rod is drawn through a die, reducing the cross-sectional area of the bar, and cut to lengths.



Testing

Final process steps include testing and inspection of the material.



Packing

Packing and shipping is done according to customer-specific requirements.

High quality according to international standards

Our manufacturing programs are supported by in-house product inspection and testing, and the extensive experience of our technical team. SSB is accredited to recognized international standards, including:

- ISO 9001 - TÜV Nord
- ISO 14001 - TÜV Nord
- BS OHSAS 18001 - TÜV Nord
- AD 2000 Merkblatt WO - TÜV Nord
- CARES - Certificate of Conformity of the Factory Production Control
- CARES - CE Declaration of Conformity



 **MARCEGAGLIA**
STAINLESS SHEFFIELD

PRODEC[®]

HEADQUARTERS

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