Sanicro® 28
Billets
Datasheet

Sanicro® 28 is a multi-purpose austenitic stainless ELC alloy for service in highly corrosive conditions. It is characterized by:

- Very high corrosion resistance in strong acids
- Very good resistance to stress and intergranular corrosion in various environments
- Very high resistance to pitting and crevice corrosion
- Good weldability

Standards

- UNS: N08028
- EN Number: 1.4563
- EN Name: X 1 NiCrMoCu 31-27-4
- W.Nr.: 1.4563
- SS: 2584

Product standards

EN 10088-3

Certificates

Status according to EN 10 204 3.1

Chemical composition (nominal) %

C	Si	Mn	P	S	Cr	Ni	Mo	Cu
≤0.020	≤0.6	≤2.0	≤0.025	≤0.010	26.5	30.5	3.3	1.0

Forms of supply

Sizes and tolerances

Round-cornered square, as well as round billets, are produced in a wide range of sizes according to the following tables. Larger sizes offered on request.

Surface conditions

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Square billets

Unground, spot ground or fully ground condition.

Round billets

Peel turned or black condition.

Square billets

Size mm	Tolerance mm	Length m
80	+/-2	4 - 6.3
100, 114, 126, 140, 150	+/-3	4 - 6.3
160, 180, 195, 200	+/-4	4 - 6.3
>200 - 350	+/-5	3 - 5.3

Sizes and tolerances apply to the rolled/forged condition.

Peel turned round billets

Size mm	Tolerance mm	Length m
75 - 200 (5 mm interval)	+/-1	max 10
>200 - 450	+/-3	3 - 8

Unground round billets

Size mm	Tolerance mm	Length m
77 - 112 (5 mm interval)	+/-2	max 10
124, 134	+/-2	max 10
127, 147, 157	+/-2	max 10
142, 152, 163	+/-2	max 10
168, 178, 188	+/-2	max 10
183, 193	+/-2	max 10

Other products

Seamless tube and pipe
Hollow bar

Mechanical properties

Sanicro® 28 conforms to the mechanical properties according to specification EN 10088-3.

Testing is performed on separately solution annealed and quenched test pieces.

At 20°C (68°F)

Metric units

Proof strength	Tensile strength	Elong.	HB
$R_{p0.2}$ [a)]	R_m	A [b)]	
MPa	MPa	%	
≥220	500-750 [c)]	≥35	≤220

Imperial units

Proof strength	Tensile strength	Elong.	Hardness
$R_{p0.2}$ [a)]	R_m	A [b)]	Rockwell C
ksi	ksi	%	
			approx.
≥32	72-108	≥35	14

1 MPa = 1 N/mm^2
a) $R_{p0.2}$ corresponds to 0.2% offset yield strength.
b) Based on $L_0 = 5.65\sqrt{S_0}$, where L_0 is the original gauge length and S_0 the original cross-sectional area.

Impact strength

Due to its austenitic microstructure, Sanicro® 28 has very good impact strength, both at room temperature and at cryogenic temperatures.

Tests on bar have demonstrated that the steel fulfils the requirements according to the European standards EN13445-2(UFPV-2)(min.60J(44ft-lb)at-270°C(-455°F))andEN10272(min.60J(44ft-lb)at-196°C.(-320°F).

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