

# Sanicro<sup>®</sup> 28

## Billets

## Datasheet

Sanicro<sup>®</sup> 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
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≤0.020	≤0.6	≤2.0	≤0.025	≤0.010	26.5	30.5	3.3	1.0
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## 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

### 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 <sup>c)</sup>	≥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<sup>2</sup>

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).

**Disclaimer:** Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice. This datasheet is only valid for Alleima materials.

