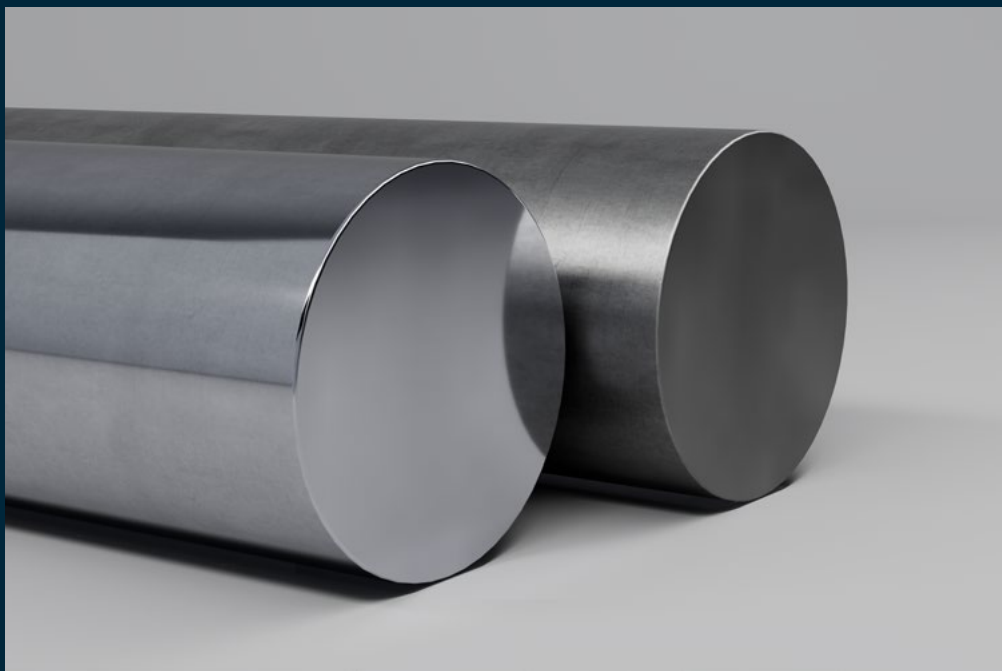


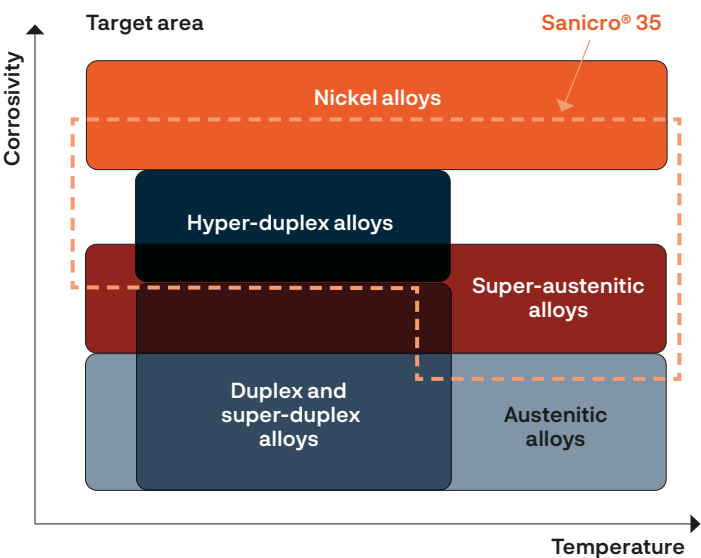


 Alleima

Sanicro[®] 35
bar

Which materials will you replace with Sanicro® 35 bar?

Sanicro® 35 challenges the use of costly nickel alloys and can upgrade duplex materials and super austenitic alloys. Available in two conditions, to suit a variety of applications.



Sanicro® 35 – main characteristics

Excellent resistance to

- Hydrogen embrittlement
- Pitting corrosion PRE(N) ≥52
- Crevice corrosion in chloride environments
- Chloride-induced stress corrosion cracking
- Seawater corrosion 30°C / 86°F

Extremely high

- Impact strength >300 J / >220 ft.lb at -60° C / -76° F

Very high

- Tensile strength
- Ductility

CO2 footprint

- Substantially lower than traditional nickel alloys

Chemical composition (nominal) %

UNS N08935

C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N	Fe
≤0.030	≤0.4	0.8	≤0.030	≤0.020	27	35	6.5	0.2	0.3	Remainder

Sanicro® 35 and Sanicro® 35-HS bar

Standards and approvals

Product standards

- ASTM B649 / ASME SB649
- UNS N08935
- NORSOK M-630 (pending)
- ISO14067 (CO2e)

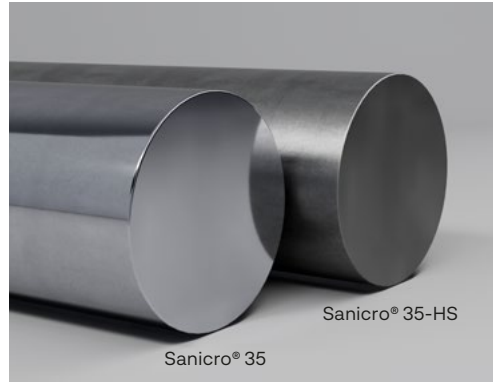
Compliant with

- ANSI/NACE MR0175/ISO 15156-3
Type 4a and 4c materials*
- ANSI/NACE MR0103/ISO 17495-1

Approvals

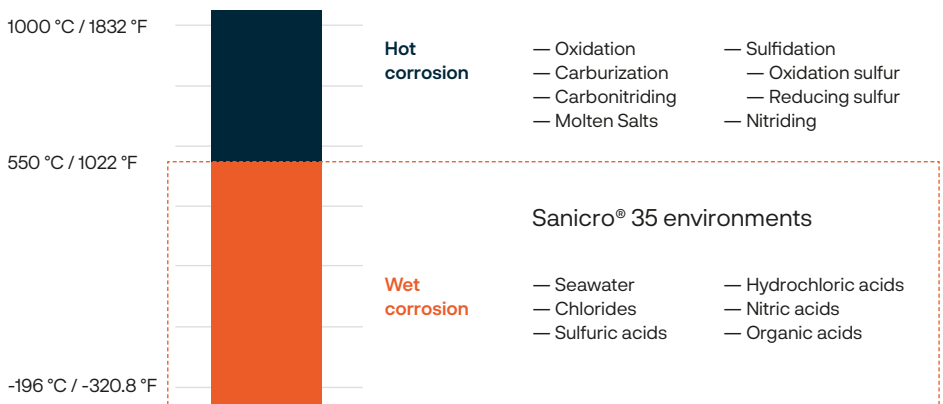
- ASME Boiler and Pressure Vessel Code (BPVC) Section VIII, Div. I and II
- ASME Code Case 2982-1
- Pre-approval for PMA (PED 2014/68/EU D $\leq$ 240mm / 9.45")

*Sanicro® 35-HS conditions:
Yield strength (Rp0.2) max. 150Ksi.
Hardness max. 40 HRC



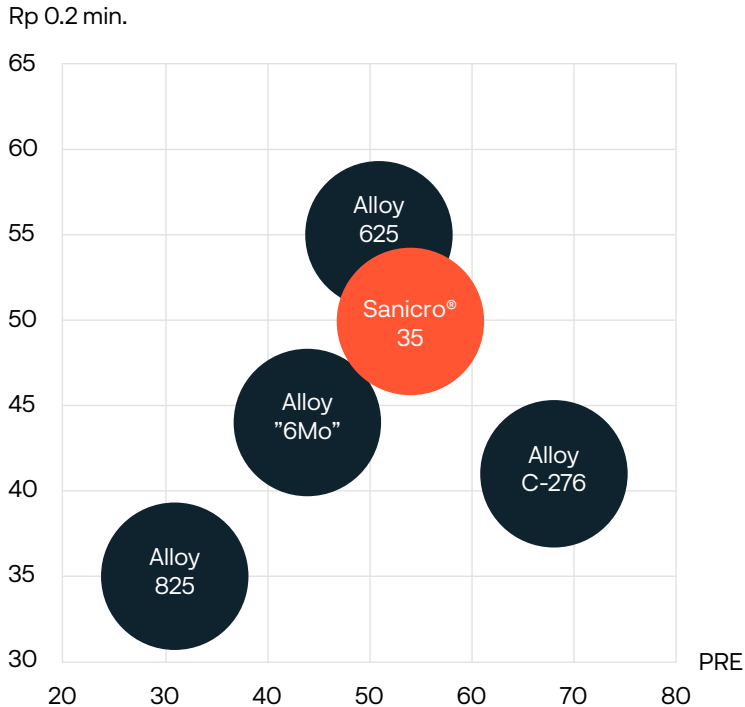
Sanicro® 35 bars

Corrosion types



Sanicro® 35 bar

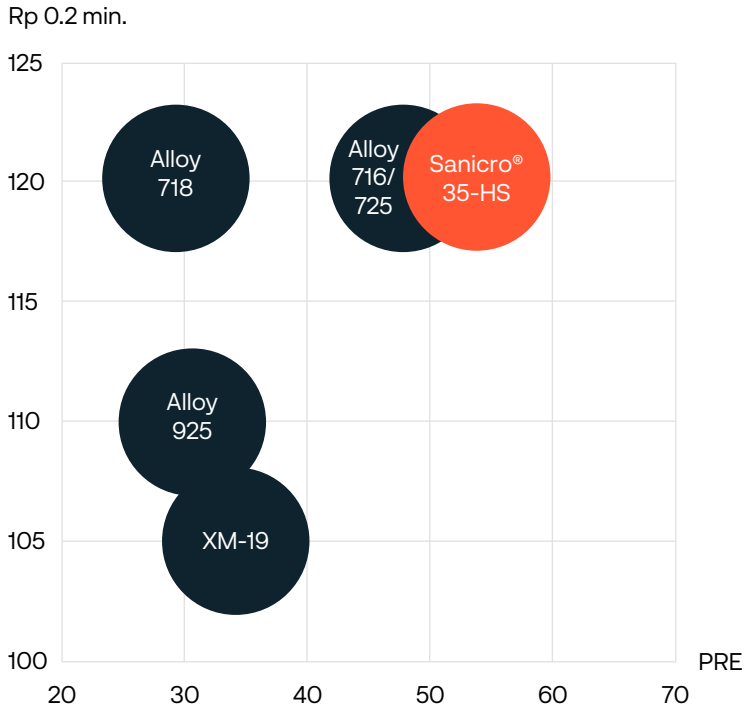
Mechanical strength and pitting resistance



- With a yield strength of minimum 50 Ksi, Sanicro® 35 bar is in par (or higher) than a number of commonly used materials.
- The excellent natural seawater corrosion resistance(30°C / 86°F) and pitting / crevice corrosion resistance, makes Sanicro® 35 bar superior to Alloy 625 Gr.1
- Due to the balanced composition, Sanicro® 35 bar is not prone to intermetallic phases which gives a high structural stability and stable welding properties
- Upgrading super austenitic and duplex materials to increase corrosion resistance is also possible

Sanicro® 35-HS bar

Mechanical strength and pitting resistance



- The yield strength of minimum 120 Ksi and excellent crevice corrosion resistance, makes the cold drawn Sanicro® 35-HS bar especially suitable for production of small size bars, fasteners, screws, nuts and bolts.
- Sanicro® 35-HS has excellent resistance (virtually immune) to Hydrogen Induced Stress Corrosion (HISC)
- Precipitation hardened grades like Alloy 718, Alloy 716/725, and Alloy 925 are known to suffer from HISC.
- This makes Sanicro® 35-HS a natural choice, fulfilling and surpass Alloy 718 requirements in seawater and other wet corrosion environments.

About Alleima

Alleima is a leading manufacturer of high value-added products in advanced stainless steels and special alloys as well as products for industrial heating. Based on long-term customer partnerships, we advance processes and applications in the most demanding industries. With more than 900 active alloy recipes, our offering comprises products for several customer segments, mainly seamless stainless tubes, electric heating technology and resistance materials, ultra-fine wire, and precious metals for use in medical devices and electronic appliances, as well as precision strip steel and strip-based products. Our fully integrated value chain, from R&D to end-product, ensures industry-leading technology, quality, sustainability, and circularity. Alleima, with headquarters in Sandviken, Sweden, has more than 6,500 employees and customers in approximately 80 countries.