

# Ferrinox 255 LT™ (UNS S32550)

Smiths Advanced Metals

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## Corrosion Resistant Stainless Steel Bar

For Oil & Gas Applications.

Ferrinox 255 LT™ (UNS S32550) is a stainless steel containing 25.5% chromium, 6% nickel with significant molybdenum, copper and nitrogen additions, and a PREN (pitting resistance equivalent) of  $\geq 40.0$ .

The copper content of 1.6% is particularly beneficial in promoting optimum resistance to corrosion in acidic environments. The chemical composition and mechanical properties conform to the requirements of UNS S32550, 1.4507 and several oil and gas industry specifications. The microstructure is controlled with a phase balance close to 50:50 austenite and ferrite with complete freedom from grain boundary carbides, sigma phase and other deleterious precipitates. The alloy is Smiths own designation and is classed as a super duplex (austenitic/ferritic) stainless steel. The material offers a viable alternative when compared to 300 series stainless steels due to the attractive performance characteristics of the alloy. The material finds use in the production of valves, pumps, shafts, control gears and wellhead equipment.

Smiths Advanced Metals stocks [Ferrinox 255 LT™ stainless steel bars](#) in a solution treated condition. We supply bars for this alloy in closer incremental sizes.



### Grades / Specifications

- 1.4507
- Ferrinox 255™
- UNS S32550
- X2CrNiMoCuN25-9-3
- ASTM A276
- ASTM A479
- NACE MR0103
- NACE MR0175
- Norsok M-630
- Norsok M-650

### Benefits

- Excellent resistance to corrosion in acids
- High resistance to stress corrosion cracking
- Good ductility
- Conformity with many oil & gas specifications
- Smiths own designation

#### \* Chemical Composition (weight %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N	Fe	**PREn
min.						24.00	6.00	3.00	1.50	0.20	Bal	40.00
max.	0.03	1.50	0.70	0.015	0.035	26.00	6.50	3.90	2.50	0.25		

\* As per Ferrinox 255LT

\*\* PREn = Cr % + 3.3Mo% + 16N%

#### \* Mechanical Properties (for bar products)

Tensile Strength	760 - 900 MPa
0.2% Proof Strength	550 MPa min
Elongation	25% min
Hardness	297 HBW Max
Charpy Impact @ -46° C	65J min average, 50J min single (longitudinal)
Charpy Impact @ -46° C	45J min average, 35J min single (transverse (over 100mm dia))

\* Properties as per Ferrinox 255LT

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