

## First Choice for Water Management Applications

Material datasheet for **1.4410 Super Duplex** | S32750 | X2CrNiMoN25-7-4 | AISI F53

1.4410 is a corrosion-resistant austenitic ferrous super-duplex steel. Due to its outstanding crevice corrosion and pitting resistance in chloride media and seawater, it is frequently used when conventional corrosion-resistant duplex steels no longer suffice.

The superior rigidity and resistance of this new duplex product also make it a preferred steel in the oil and construction industries, the chemical and petrochemical industries, as well as in the offshore, textile and pulp industries.

### WELDING

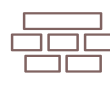
1.4410 can be flawlessly worked due to its high yield strength and rigidity. It can be welded with any method with the exception of gas welding.



### ROUND BAR STEEL

#### AVAILABLE DIMENSIONS

16, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 180, 200 mm



#### APPLICATIONS

- Onshore/offshore industries
- Pipeline construction
- Chemical and petrochemical industries
- Oil and construction industries
- Textile and pulp industries
- Water management, wastewater treatment and desalination plants

#### MACHINING

Its properties are somewhat similar to those of the material 1.4462. The high alloy content and two-phase structure can make machining difficult. This should be considered when selecting tools, working times and coolant.

MECHANICAL PROPERTIES UNDER HIGH TEMPERATURES

Tensile strength value	Delivery state	Temperature °C				
		100	150	200	250	300
Rp0.2	solution annealed	≥450	≥420	≥400	≥380	-

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Stated values apply to bar steel up to 160 mm max.  
(EN 10088-3)

<b>Heat treatment condition:</b> solution annealed	<b>Tensile strength Rm (N/mm²):</b> 730 - 930
<b>Diameter dimension:</b> max. 160 mm	<b>Elongation at fracture A5 (%):</b> longitudinal: min. 25
<b>Yield strength Rp0.2 (N/mm²):</b> at least 530	<b>Notch-impact strength (ISO-V) J:</b> longitudinal: min. 100

HEAT TREATMENT

<b>Solution annealing:</b> 1040 - 1120 °C / Cooling: Water, air	<b>Hot forming:</b> 1200 - 1000 °C / Cooling: Air
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CHEMICAL ANALYSIS

Chem. element	1.4410 Super Duplex	
	min.	max.
C	-	0.03
Si	-	1.0
Mn	-	2.0
P	-	0.035
S	-	0.015
Cr	24.0	26.0
Mo	3.0	4.50
Ni	6.0	8.0
N	0.24	0.35
Cu	-	0.50

STAPPERT Deutschland GmbH

Willstätterstraße 13 · 40549 Düsseldorf  
T +49 211 5279-0 · F +49 211 5279-177

deutschland@stappert.biz  
deutschland.stappert.biz



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**Note:** All information regarding material properties, recommendations for use of the material, and available delivery configurations have been carefully researched, and is provided according to the best of our knowledge. However, no guarantee is made for the information provided. In the case of orders, all information and data must always be agreed in a separate written agreement.