



Grade	Code	AISI	Duplex Stainless Steel
1.4462	S 32900 (X3CrNiMoN27-5-2)	F51	

Steel Properties

Material 1.4462 is one of the austenitic-ferritic duplex steels. 1.4462 has very good corrosion resistance, with simultaneously high mechanical characteristic values for strength and yield strength. Its austenitic-ferritic structure also makes it possible to use F51 at low temperatures.

Chemical Composition (1.4462)

C %	P %	Si %	Mn %	S %	Cr %	Mo %	Ni %	AL %	N %
0,03 max.	0,03 max.	1,00 max.	2,00 max.	0,02 max.	21,00 – 23,00	2,5 – 3,5	4,50 – 6,50	-	0,10 – 0,22

Mechanical Properties (Solution Annealed)

Condition	Rp0.2, Mpa	Rm, Mpa	Elongation [%]	Hardness [HB]
Bar & Rod	≥ 450	650 – 880	25	< 270

Suitable For

1.4462 is used on cargo tanks in chemical tankers, pulp and paper industry applications such as digesters and process tanks, oil and gas industry, typically tubular products, flanges, fittings and valves, structural components in bridges.

Remarks

1.4462 (UNS S31803, F51) cannot be hardened by conventional heat treatment, though 1.4462 is a work hardening steel. Duplex can be solution annealed at 1020-1100°C, water quench.

Specification

1.4462 Duplex Stainless Steel, S 32900, X3CrNiMoN27-5-2, AISI F51

Norm

ASTM A 276/ ASME SA-276, ASTM A 479/ ASME SA-479