

SUPER DUPLEX UNS 32760 PIPE

The method of manufacture can be either seamless or automatic welding, with no addition of filler metal. Pipe may be hot or cold finished but must always be furnished in the heat treated condition.

SUPER DUPLEX, AN AUSTENITIC FERRITIC IRON CHROMIUM-NICKEL ALLOY WITH MOLYBDENIM ADDITION. GOOD RESISTANCE TO PITTING, HAS A HIGH TENSILE STRENGTH AND HIGHER RESISTANCE TO STRESS CORROSION CRACKING AT MODERATE TEMPERATURES TO THAT OF CONVENTIONAL AUSTENITIC STAINLESS STEELS

CHEMICAL COMPOSITION (All values are maximum unless stated otherwise)

%C	%Cr	%Ni	%Mo	%S	%P	%SI	%Mn	%N	%Cu	%W
0.03	24.0-26.0	6.0-8.0	3.0-4.0	0.01	0.03	1.0	1.0	0.2-0.3	0.5-1.0	0.5-1.0

UNS 32750 VALUES

%C	%Cr	%Ni	%Mo	%S	%P	%SI	%Mn	%N	%Cu
0.03	24.0-26.0	6.0-8.0	3.0-5.0	0.02	0.035	0.80	1.20	0.24-0.32	0.5

MECHANICAL PROPERTIES

PREn (PITTING RESISTANCE EQUIVALENT) - [%Cr] + [3.3 x %Mo] + [16 x %N]
HEAT TREATMENT

YIELD STRENGTH	TENSILE STRENGTH	ELONGATION (MIN)	REDUCTION OF AREA (MIN)	HARDNESS (MAXIMUM)	ASTM SPECIFICATION
(ksi) (mpa)	(ksi) (mpa)			(HB) (HRC)	ASTM A790 32760
80 550	109 750	25	45	28	
<u>UNS 32750 VALUES</u>					
80 550	116 800	15	-	310 32	ASTM A790 UNS 32750

SOLUTION ANNEALED AT 1100 DEG C—1140 DEG C WATER QUENCH EQUIVALENT GRADES

UNS	SB EN	SWEDEN SS	GERMANY DIN	SANDVIK +
32760	1.4501	2377	X2 CrNiMoN 22.5.3	-
32750	1.4410	2328	X2 CrNiMoN 25.74	SAF 2507

Duplex is a material having an approximate equal amount of austenite and ferrite. These combine excellent corrosion resistance with high strength. Mechanical properties are approximately double those of singular austenitic steel and resistance to stress corrosion cracking is superior to type 316 stainless steel in chloride solutions. Duplex material has a ductile / brittle transition at approximately - 50deg°C. High temperature use is usually restricted to a maximum temperature of 300deg°C for indefinite use due to embrittlement