

Zeron 100

Zeron 100 (UNS S32760/F55) is a super duplex stainless steel, which contains slightly more copper and tungsten than duplex stainless 2507. It offers strength levels exceeding that of standard duplex grades like 2205. Zeron 100 is highly resistant to corrosion in a wide range of organic and inorganic acids. The copper content permits excellent resistance to corrosion in many non-oxidizing and mineral acids like hydrochloric and sulfuric acid. It is also highly resistant to strong alkalis. It is suitable for service temperatures up to approx. 315°C.

It is listed in NACE MR 0175 for sour service and has gained ASME Approval for Pressure Vessel applications.

Chemical Composition, %

element	Cr	Ni	Fe	Mo	W	Cu	N	C	Mn	Si	P	S
min.	24.00	6.00	bal.	3.00	0.50	0.50	0.20					
max.	26.00	8.00		4.00	1.00	1.00	0.30	0.030	1.00	1.00	0.030	0.010

Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.

Designation and standards

National Standards	Material designation	Chemical composition	Forgings	Rod and bar	Plate and sheet	Strip	Seamless tube
ASTM ASME NACE	UNS S32760 F55	A959 SA959 MR0175	A182 SA182 A473 SA473	A276 SA276 A479 SA479	A240 SA240	A240 SA240	A789 SA789 A790 SA790
DIN	1.4501 X2CrNiMoCuWN25-7-4	DIN 10088-1	DIN 10250-4	DIN 10088-3 DIN 10272	DIN 10088-2 DIN 10028-7	DIN 10088-2 DIN 10028-7	
GB/T	022Cr25Ni7Mo4WCuN 00Cr25Ni7Mo4WCuN S27603	GB/T 20878		GB/T 31303	GB/T 4237	GB/T 3280	

Density 7.84g/cm³

Corrosion resistance

- high resistant to pitting and crevice corrosion in warm seawater
- excellent resistance to stress corrosion cracking in both chloride and sour environments
- superior resistance to sulfuric acid at most concentrations
- improved resistance over austenitic stainless to erosion corrosion and corrosion fatigue
- acceptable resistance to sulfide stress cracking as per NACE MR0175

Applications

Typical applications are:

- oil and gas industry applications
- pollution control
- pulp and paper
- power generation
- flue-gas desulfurization
- chemical, pharmaceutical
- desalination
- mining and mineral industries
- marine industries

You could send email to sales@huishih.com for more information.

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