# HUISHIH FORGING \_\_\_\_

## 2507

2507 (UNS S32750/F53) is a super duplex stainless steel. It has excellent corrosion resistance to a wide variety of media, with outstanding resistance to pitting and crevice corrosion in seawater and other chloride containing environments due to its high chromium, molybdenum, and nitrogen level. The duplex microstructure gives this grade high strength, a low coefficient of thermal expansion and higher heat conductivity than austenitic steels and 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	Мо	Cu	Ν	С	Mn	Si	Р	S
min.	24.00	6.00	bal.	3.00		0.24					
max.	26.00	8.00		5.00	0.50	0.32	0.030	1.20	0.80	0.035	0.020

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

#### **Designation and standards**

National	Material	Chemical	Forgings	Rod and	Plate and	Strip	Seamless
Standards	designation	composition	rorgings	bar	sheet	Suip	tube
ASTM ASME NACE	UNS S32750 F53	A959 SA959 MR0175	A182 SA182	A479 SA479	A240 SA240	A240 SA240	A789 SA789 A790 SA790
DIN	1.4410 X2CrNiMoN25-7-4	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	022Cr25Ni7Mo4N 00Cr25Ni7Mo4N \$25073	GB/T 20878		GB/T 31303	GB/T 4237	GB/T 3280	

#### Density 7.82g/cm<sup>3</sup>

#### **Corrosion resistance**

- extremely resistant to uniform corrosion by organic acids like formic and acetic acid
- excellent resistance to inorganic acids, especially those containing chlorides
- better corrosion resistance than 904L in dilute sulfuric acid contaminated with chloride ions
- good resistance to hydrochloric acid
- highly resistant to carbide-related intergranular corrosion
- excellent resistance to chloride stress corrosion cracking, superior to 2205 stainless steel
- excellent resistance to pitting and crevice corrosion
- acceptable resistance to sulfide stress cracking as per NACE MR0175

#### Applications

Typical applications are:

- oil and gas industry equipment
- offshore platforms, heat exchangers process and service water systems
- chemical process industries, heat exchangers, vessels and piping
- desalination plants, high pressure RO-plant and seawater piping
- power industry FGD systems, utility and industrial scrubber systems, absorber towers, ducting, piping

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

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