

## 13-8Mo

13-8Mo is a martensitic precipitation-hardening stainless steel that has excellent strength, high hardness, superior toughness, and good corrosion resistance. Good transverse toughness properties are achieved by tight chemical composition control, low carbon content, and vacuum induction melting followed by electro-slag remelting.

### Chemical Composition, %

element	Cr	Ni	Fe	Mo	Al	N	C	Mn	Si	P	S
min.	12.25	7.50	bal.	2.00	0.90	0.010	0.050	0.20	0.10	0.010	0.008
max.	13.25	8.50		2.50	1.35						

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
ASTM	UNS S13800 XM-13	A959	A705	A564	A693	A693
ASME		SA959	SA705	SA564	SA693	SA693
SAE			AMS5629	AMS5629	AMS5864	
GB/T	04Cr13Ni8Mo2Al S51380	GB/T 20878			GB/T 3280 GB/T 4237	GB/T 3280 GB/T 4237

**Density** 7.81g/cm<sup>3</sup>

### Corrosion resistance

- excellent resistance to oxidation up to approx. 540°C
- corrosion resistance comparable to stainless type 304 in most media
- best resistance to stress-corrosion cracking of all of the precipitation hardenable stainless steels, gained by hardening at high temperatures

### Applications

Typical applications are:

- screws and bolts
- missile components
- fittings and fasteners
- injection molding equipment
- nuclear and petrochemical industry equipment
- aircraft components such engine, landing gear and structural sections