

### Material Designation

S66286 UNS  
660 AISI  
Alloy A-286

### Standards

ASTM A453, A638  
AMS 5732, 5737

### Chemical Composition Mass-%

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Ti	Al	B	Co
min.	-	-	1,00	-	-	13,5	1,0	24,0	-	0,10	1,90	-	0,003	-
max.	0,08	1,00	2,00	0,025	0,015	16,0	1,5	27,0	0,50	0,50	2,30	0,35	0,010	1,00

Customer specific restrictions upon request

### Properties

Stainless austenitic Cr-Ni-steel with excellent heat resistance as well as ductility at low temperatures. Properties can be adjusted by precipitation hardening within a wide range. Good creep strength. The remelted condition (ESR or VAR) provides best homogeneity and an improved corrosion resistance.

### Delivery Condition

✘ solution annealed and precipitation hardened (+AT +P)

### Application Area

Components for high mechanical loads requiring creep resistance at working temperatures up to 1300 °F.

Non-magnetic parts for cryogenic applications.

### Typical Applications

- ✘ High temperature fasteners
- ✘ Turbines, compressors and rotors
- ✘ Chemical process industry
- ✘ Nuclear energy technology
- ✘ Cryogenic technology

### Mechanical Properties

Standard, Class	Yield strength [ksi]	Tensile strength [ksi]	Red. of area [%]	Elong. [%]	Hardness [HBW]
A453, A-C / A638	≥ 85	≥ 130	≥ 18	≥ 15	248 - 341
A453, D (≤ 2.5")	≥ 105	≥ 130	≥ 18	≥ 15	248 - 321
A453, D (> 2.5")	≥ 95	≥ 120	≥ 18	≥ 15	248 - 321
AMS 5732	≥ 85	≥ 130	≥ 20	≥ 15	248 - 341
AMS 5737	≥ 95	≥ 140	≥ 15	≥ 12	277 - 363

### Stress rupture test

Standard, Class	Temperature [° F]	Stress [ksi]	Rupture time [h]	Elongation [%]
A453, A-C	1200	≥ 56	≥ 100	≥ 5
A638 / AMS 5737*	1200	≥ 65	≥ 23	≥ 3 (5*)
AMS 5732	1200	≥ 70	≥ 23	≥ 5

### Heat Treatment

	Standard, Class	Temperature [°F] / Duration	Cooling medium
Solution annealing (+AT)	A453, A / A638, Type 1 AMS 5737	1650 ± 25 / min. 2 h	Water
	A453, B / A638, Type 2 AMS 5732	1800 ± 25 / min. 1 h	Water
Precipitation hardening (+P)	A453 / ~A638 ~AMS5732 / ~AMS 5737	1325 ± 25 / min. 16 h	Air

### Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNVGL ...
- Customer specific approval certificates

### Innovation

- Fully automated ultrasonic testing up to dia. 37.4"
- CO<sub>2</sub>-reduction by innovative heat treatment solutions

### Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

### Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

### Your personal contact:

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