GNEE STEEL

What is AMS 5735?

AMS 5735 is a specific standard for precipitation-hardening stainless steel (commonly known as A286), designed for high-strength, corrosion-resistant applications in aerospace and other high-temperature environments. It covers various forms including bars, forgings, tubes, and rings. It maintains its strength at temperatures up to 1300°F (700°C) and exhibits excellent non-magnetic properties at low temperatures.

What is A286 ams 5737?

AMS 5737 is a sub-type specification of Stainless Steel A286, a precipitation-hardenable super-alloy with high strength at elevated temperatures, good corrosion resistance up to 1300 °F (700 °C), and excellent non-magnetic strength at cryogenic temperatures, down to -320 °F (-196 °C).

Specifications

UNS: S66286 **W. Nr./EN:** 1.4980 **AMS:** 5525, 5732, 5737, 5804 **GE:** B50T1181, B50T12, B50T81

ASTM A 453	AMS	Anneal	Aging Treatment	Yield Strength, Min	Tensile Strength, Min
Grade 660 Class B	5732	1800°F	1300-1400°F, 16 hours	85 ksi	130 ksi
Grade 660 Class A	5737	1650°F	1300-1400°F, 16 hours	95 ksi	140 ksi

Chemical Composition, %

	Cr	Ni	Mo	Co	V	Al	Ti	B	C	Fe	Mn	Si	P	S
MIN	13.5	24.0	1.0	–	0.1	–	1.9	0.003	–	–	–	–	–	–
MAX	16.0	27.0	1.5	1.0	0.5	0.35	2.35	0.01	0.08	balance	2.0	1.0	0.025	0.025

Features

- High strength to 1000°F
- Oxidation resistant to 1500°F

Applications

- Jet engine components
- High temperature fasteners, springs
- Non-magnetic cryogenic equipment

Physical Properties

Density: 0.303 lb/in^3 **Melting Range:** 2350-2460°F

Temperature, °F	200	800	1000	1200	1400
Coefficient* of Thermal Expansion, in/in°F x 10^{-6}	9.2	9.6	9.8	9.9	10.3
Thermal Conductivity Btu • ft/ft^2 • hr • °F	8.0	9.8	13.0	14.1	–
Modulus of Elasticity Dynamic, psi x 10^6	–	–	24	22	23

** 70°F to indicated temperature.*

Mechanical Properties

Representative Tensile Properties, Sheet AMS 5732, 1800°F/1325°F Heat Treat

Temperature, °F	70 *	70	400	800	1000	1200	1400
Ultimate Tensile Strength, ksi	95 *	145	143	138	131	103	64
0.2% Yield Strength, ksi	50 *	95	93	93	87	88	62
Elongation, %	40 *	24	21	18	18	13	18

** Annealed*

Typical Stress-Rupture Strength AMS 5732, 1800°F/1325°F Heat Treat

Temperature, °F	1000	1100	1200
100 Hours, ksi	99	81	61
1,000 Hours, ksi	88	71	46

If you have project requirements for AMS 5737 A286 stainless steel bars, we welcome your order. GNEE has a large inventory of popular products for you to choose from. It can be processed into various practical product forms, including plates, coils, tubes, bars, wires, etc. For detailed chemical composition and free samples, please contact our factory immediately. We offer competitive prices and excellent service.Email: info@gneestainless.com