

This page is mainly introduced the A 286 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of A 286, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Superalloys A 286

A 286 Standard Number:		
ITEM	Standard Number	Descriptions
1	SAE AMS 5525J (2007)	Steel, Corrosion and Heat-Resistant, Sheet, Strip, and Plate 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V 1800 °F (982 °C) Solution Heat Treated
2	SAE AMS 5726E (2008)	Steel, Corrosion and Heat-Resistant, Bars and Wire 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V 1800 °F (982 °C) Solution Heat Treated and Work-Strengthened Consumable Electrode Melted 200 ksi (1379 MPa) Tensile Strength
3	SAE AMS 5731L (2006)	Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, Tubing, and Rings 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted, 1800 °F (982 °C) Solution Heat Treated
4	SAE AMS 5732J (2006)	Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, Tubing, and Rings 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted 1800 °F (982 °C) Solution and Precipitation Heat Treated
5	SAE AMS 5734K (2006)	Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, and Tubing 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted, 1650 °F (899 °C) Solution Heat Treated
6	SAE AMS 5735J (1974)	Steel Bars, Forgings, Tubing, And Rings, Corrosion And Heat resistant 15Cr-26Ni-1.3Mo-2.1Ti-0.3V 1800°F (982.2°C) Solution and Precipitation Heat Treated
7	SAE AMS 5736G (1974)	Steel Bars, Forgings, Tubing, and Rings, Corrosion and Heat Resistant 15Cr 26Ni 1.3Mo 2.1Ti 0.30V 1800°F (982°C) Solution Heat Treated
8	SAE AMS 5737P (2006)	Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, and Tubing 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted 1650 °F (899 °C) Solution and Precipitation Heat Treated
9	SAE AMS 5810B (2008)	Steel, Corrosion and Heat Resistant, Flat Wire 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V 1800 °F (982 °C) Solution Heat Treated, Cold Drawn or Cold Rolled and Aged, Consumable Electrode Melted
10	SAE AMS 5853C (2006)	Steel, Corrosion and Heat-Resistant, Bars and Wire 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted 1800 °F (982 °C) lösungsgeglüht und Work-Strengthened 160 ksi (1103 MPa) Tensile Strength
11	SAE AMS 5858D (2009)	Steel, Corrosion and Heat Resistant, Sheet, Strip, and Plate 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Multiple Melted, 1800 °F (982 °C) Solution Heat Treated, Welding Grade Precipitation Hardenable
12	SAE AMS 5895E (2009)	Steel, Corrosion and Heat-Resistant, Bars, Wire, Forgings, Tubing, and Rings 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.006B - 0.30V Consumable Electrode Melted, 1750 °F (954 °C) Solution Heat Treated, Welding Grade Precipitation Hardenable
13	SAE AMS 5804H (2013)	Steel, Corrosion and Heat-Resistant, Welding Wire 15Cr - 25.5Ni - 1.3Mo - 2.2Ti - 0.006B - 0.30V

14	SAE AMS 5805H (2012)	Steel, Corrosion and Heat Resistant, Welding Wire 15Cr - 25.5Ni - 1.2Mo - 2.1Ti - 0.004B - 0.30V Vacuum Induction Melted, Environment Controlled Packaging
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A 286 Chemical composition(mass fraction)(wt.%)

Chemical			Min.(%)			Max.(%)			
C						0.08			
Mn						2.00			
P						0.025			
S						0.025			
Si						1.00			
Cr			13.50			16.00			
Ni			24.00			27.00			
Mo			1.00			1.50			
Ti			1.90			2.35			
V			0.10			0.50			
Al						0.35			
B			0.0003			0.010			
Co						1.00			
Cu						0.50			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

A 286 Physical Properties

Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	123-321	-
HRC	30	-

A 286 Mechanical Properties

Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta 5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	235-268	-
HRC	30	-

A 286 Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

A 286 Range of products

Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	Φ8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot-Rolled	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID-WASHED

We can produce Superalloys the specifications follows: