

This page is mainly introduced the ER 308L Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ER 308L, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel ER 308L

ER 308L Standard Number:		
ITEM	Standard Number	Descriptions
1	A5.9/A5.9M	Bare Stainless Steel Welding Electrodes and Rods

ER 308L Chemical composition(mass fraction)(wt.%)									
Chemical		Min.(%)				Max.(%)			
C						0.025			
Si						0.40			
Mn						1.75			
P						0.045			
S						0.03			
Cr		19.0				21.0			
Ni		8.00				12.0			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Austenitic wire for metal inert gas welding. It is suitable for welding corrosion resistant 18/8 CrNi steels for devices, vessels and parts in chemical, pharmacy and cellulose industry for temperature up to 350°C. Welded material has oxidation resistance up to 800°C and ductility to -196°C. For joining with base materials: 1. Alloyed corrosion resistant: DIN X5CrNi 18 9 or WN 1.4301; DIN X2CrNi 18 9 or WN 1.4306; DIN X10CrNiNb18 9 or WN 1.4550;

The welding materials are classified according to chemical composition.

The values contained in the mechanical properties are not requirements of this specification. They are obtained from weld metal specified in A5.4.

ER 308L 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	-

ER 308L 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	-

ER 308L Heat Treatment Regime

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

ER 308L 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 Specialsteel the specifications follows: