

This page is mainly introduced the 18-8 Type 304 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 18-8 Type 304, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 18-8 Type 304

18-8 Type 304 Standard Number:

ITEM	Standard Number	Descriptions
1	MIL-S-5059D	Steel, corrosion resistant (18-8) plate, sheet and strip

18-8 Type 304 Chemical composition (mass fraction) (wt.%)

Chemical		Min.(%)		Max.(%)					
C				0.08					
Si				1.00					
Mn				2.00					
P				0.045					
S				0.03					
Cr		18.0		20.0					
Ni		8.00		10.5					
N				0.10					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

MIL-S-5059D Steel, corrosion resistant (18-8) plate, sheet and strip;
Replaced by: SAE AMS 5513; SAE AMS 5910; SAE AMS 5911; SAE AMS 5912; SAE AMS 5913, SAE AMS 5524; SAE AMS 5516; SAE AMS 5517; SAE AMS 5518; SAE AMS 5519; SAE AMS 5901; SAE AMS 5902; SAE AMS 5903; SAE AMS 5904; SAE AMS 5905; SAE AMS 5906; SAE AMS 5907

Replaced by SAE-AMS5513, SAE-AMS5910-5913, SAE-AMS5524, SAE-AMS5516-5519, SAE-AMS5901-5907

18-8 Type 304 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	-

18-8 Type 304 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	-

18-8 Type 304 Heat Treatment Regime

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

18-8 Type 304 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
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We can produce Specialsteel the specifications follows: