

This page is mainly introduced the Nickel 270 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Nickel 270, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel Nickel 270

Nickel 270 Standard Number:

ITEM	Standard Number	Descriptions
1	SAE J 470 (1976)	Wrought nickel and nickel-related alloys
2	UNS N02270	
3	ASTM F 3	

Nickel 270 Chemical composition(mass fraction)(wt.%)

Chemical	Min.(%)	Max.(%)
C		0.02
Si		0.001
Mn		0.001
Cr		0.001
Ni	99.97	
Mo		
Co		0.001
W		
Al		
Cu		0.001
Ti		0.001
Fe		0.005
Mg		0.001
S		0.001

C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Wrought nickel and nickel-related alloys

A high-purity grade of nickel made by powder

metallurgy. It has a low base hardness and

high ductility. Its extreme purity is useful for

components of hydrogen thyratrons. It is also

used for electrical resistance thermometers.

Nickel 270 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	-

Nickel 270 Mechanical Properties

Tensile strength	231-231	σ_b /MPa

Yield Strength	154	$\sigma_{0.2} \geq / \text{MPa}$
Elongation	56	$\delta_5 \geq (\%)$
ψ	-	$\psi \geq (\%)$
Akv	-	$Akv \geq / \text{J}$
HBS	235-268	-
HRC	30	-

Nickel 270 Heat Treatment Regime

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

Nickel 270 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	$\Phi 8$ -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: