This page is mainly introduced the NIMONIC® alloy 105 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of NIMONIC® alloy 105,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Superalloys NIMONIC® alloy 105

NIMONIC® alloy 105 Standard Number:		
ITEM	Standard Number	Descriptions
1	SMC-081	NIMONIC® alloy 105 (W. Nr. 2.4634)

NIMONIC® alloy 105 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.17
Si		1.00
Cu		0.20
Fe		1.00
Mn		1.00
Cr	14.00	15.70
Ti	0.90	1.50
Al	4.50	4.90
Co	18.00	22.00
Mo	4.50	5.50
Pb		0.0015
S		0.0100
B	0.0030	0.0100
Zr		0.1500
Ni		Balance

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

NIMONIC® alloy 105 (W. Nr. 2.4634)

NIMONIC® alloy 105 Physical Properties

Tensile strength	115-234	σb/MPa
Yield Strength	23	σ 0.2 ≥/MPa
Elongation	65	δ5≥ (%)
ψ	-	ψ≥ (%)
Akv	-	Akv≥/J
HBS	123-321	-
HRC	30	-

NIMONIC® alloy 105 Mechanical Properties

Tensile strength	231-231	σb/MPa
Yield Strength	154	σ 0.2 ≥/MPa
Elongation	56	δ5≥(%)
ψ	-	ψ≥(%)
Akv	-	Akv≥/J
HBS	235-268	-
HRC	30	-

NIMONIC® alloy 105 Heat Treatment Regime

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

NIMONIC® alloy 105 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: