

This page is mainly introduced the NiCr19Fe19Nb5Mo3 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of NiCr19Fe19Nb5Mo3, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Superalloys NiCr19Fe19Nb5Mo3

### NiCr19Fe19Nb5Mo3 Standard Number:

ITEM	Standard Number	Descriptions
1	DIN 17744 (2002)	Wrought nickel alloys with molybdenum and chromium - Chemical composition
2	DIN EN 10088-1	Stainless steels - Part 1: List of stainless steels
3	DIN EN 10302 (2002)	Creep resisting steels, nickel and cobalt alloys

### NiCr19Fe19Nb5Mo3 Chemical composition (mass fraction) (wt.%)

Chemical		Min.(%)		Max.(%)					
C				0.03					
Cr		17.0		21.0					
Mo		2.80		3.30					
Ni		50.0		55.0					
Al		0.20		0.60					
Nb		4.75		5.50					
Fe				Bal					
Si				0.35					
Mn				0.35					
P				0.015					
S				0.015					
B				0.006					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

NiCr19Fe19Nb5Mo3; NiCr19Fe19Nb5Mn3

### NiCr19Fe19Nb5Mo3 Physical Properties

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

### NiCr19Fe19Nb5Mo3 Mechanical Properties

Tensile strength	231-231	$\sigma_b$ /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
$\psi$	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	235-268	-
HRC	30	-

### NiCr19Fe19Nb5Mo3 Heat Treatment Regime

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

### NiCr19Fe19Nb5Mo3 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

□ □ □□ □□□□<sup>4</sup> □□□□□□□□□□□□