

This page is mainly introduced the X3CrMnNiMoN25-6-4 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X3CrMnNiMoN25-6-4, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Special Alloy X3CrMnNiMoN25-6-4

X3CrMnNiMoN25-6-4 Standard Number:

ITEM	Standard Number	Descriptions
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X3CrMnNiMoN25-6-4 Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
≤ 0.0300	≤ 0.8	4.0- 6.0	≤ 0.03	≤ 0.015	24.5-26.5	3.5-4.5	2.0-3.0		
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other
	0.30-0.45								

Carbon Equivalent

$$\text{Cr eq} = 28.87$$

$$\text{Ni eq} = 18.52$$

Formulas

$$\text{Cr eq} = \text{Cr} + 1.5 * \text{Si} + \text{Mo} + 0.5 * \text{Nb}$$

$$\text{Ni eq} = \text{Ni} + 30 * (\text{C} + \text{N}) + 0.5 * (\text{Mn} + \text{Cu} + \text{Co})$$

Comment: Stainless steel

The value of C eq is by its nature approximative. Please review these results with welding specialists, especially if there is significant

difference among results obtained by different formulas and/or with values recommended by standards.

X3CrMnNiMoN25-6-4 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	-

X3CrMnNiMoN25-6-4 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	-

X3CrMnNiMoN25-6-4 Heat Treatment Regime

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

X3CrMnNiMoN25-6-4 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 Special Alloy the specifications follows: