

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 06KHN28MDT (06XH28МДТ).

Grade :	06KHN28MDT (06XH28МДТ) (0X23H28M3Д3Т ЭИ943)
Substitute:	03XH28МДТ
Classification :	Corrosion-resistant alloy
Equivalent grades:	Go here

Chemical composition in % for grade 06KHN28MDT (06XH28МДТ)

Fe	C	Si	Mn	Ni	S	P	Cr	Mo	Ti	Cu
36.885 - 46.5	max 0.06	max 0.8	max 0.8	26 - 29	max 0.02	max 0.035	22 - 25	2.5 - 3	0.5 - 0.9	2.5 - 3.5

Mechanical properties under T=20°C for grade 06KHN28MDT (06XH28МДТ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe cooling strain, GOST 9941-81			490		30			
Forging, GOST 25054-81			510	216	30-36	30-40		
Blank for pipe			540	245	35	50	980	Guenching 1050 - 1080°C, water,
Sheet trick, GOST 7350-77			540	215	35			Guenching 950 - 1080°C, Cooling water,
Sheet thin, GOST 5582-75			540		35			Guenching 1050 - 1080°C, Cooling water,
Sheet thin, GOST 4986-79			550		13-25			Guenching 930 - 1050°C, Cooling air,

Brinell hardness for 06KHN28MDT (06XH28МДТ) , Forging GOST 25054-81	HB 10 ⁻¹ = 200 MPa
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Technological properties for grade 06KHN28MDT (06XH28МДТ)

Weldability:	without limitations.
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Physical properties for grade 06KHN28MDT (06XH28МДТ)

T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹
Grade	MPa	1/Grade	Watt/(m·Grade)	kg/m ³	J/(kg·Grade)	Ohm·m
20			13	7960		750
100	1.91	10.9	13			
200	1.86	12.9	15			
300	1.79	13.6	17			
400	1.71	14.4				
500	1.61	14.9	22			
600	1.56	15.3	24			
700	1.51	16.8	25			

800	1.45	16.3	26			
900		16.8				
T	$E \cdot 10^{-5}$	$\alpha \cdot 10^6$	λ	ρ	C	$R \cdot 10^9$

Equivalent steels for grade 06KHN28MDT (06XH28MDT)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France
-	DIN, WNr	JIS	AFNOR
N08028	1.4563	SCS23	Z1NCU31-27-03

Specification :**Mechanical properties :**

- σ_B - Tensile strength , [MPa]
 σ_T - Yield stress , [MPa]
 δ_5 - Specific elongation at fracture , [%]
 ψ - Reduction of area , [%]
KCU - Impact strength , [kJ / m²]
HB - Brinell hardness , [MPa]

Physical properties :

- T** - Test temperature , [Grade]
E - Young modulus , [MPa]
 α - Coefficient of linear expansion (range 20° - T) , [1/Grade]
 λ - Thermal (heat) condition coefficient , [Watt/(m·Grade)]
 ρ - Density , [kg/m³]
C - Specific heat (range 20° - T) , [J/(kg·Grade)]
R - Electrical resistance , [Ohm·m]

Weldability :

- without limitations** - welding is done without heating and subsequent heat treating
limited weldability - welding is possible under heating up to 100-120 grade and subsequent heat treating
hard weldability - obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating is annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more than 2500 steels and alloys (stainless steel, alloy steel, carbon steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).
 Helpful for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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