

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 08KH20N14S2 (08X20H14C2).

Grade :	08KH20N14S2 (08X20H14C2) (0X20H14C2 ЭИ732)
Classification :	High alloy high-temperature steel
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Chemical composition in % for grade 08KH20N14S2 (08X20H14C2)

C	Si	Mn	Ni	S	P	Cr
max 0.08	2 - 3	max 1.5	12 - 15	max 0.025	max 0.035	19 - 22

Mechanical properties under T=20°C for grade 08KH20N14S2 (08X20H14C2)

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			510		35			
Pipe hot strain, GOST 9940-81			510		35			
Bar, GOST 5949-75			540	245	40	50	980	Guenching 1000 - 1150°C, air,

Physical properties for grade 08KH20N14S2 (08X20H14C2)

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				7700		

Equivalent steels for grade 08KH20N14S2 (08X20H14C2)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Spain	China
-	DIN,WNr	JIS	AFNOR	BS	EN	UNE	GB
XM-15	X15CrNiSi20-12	SUH309	Z10CNS25-20 Z17CNS20-12	X15CrNiSi20-12	X15CrNiSi20-12	X15CrNiSi20-12	1Cr20Ni14Si2

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 / m ²]
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 - Termal (heat) condition coefficient , [Watt/(m·Grade)]

ρ - Density , [kg/m³]

C - Specific heat (range 20° - T), [J/(kg·Grade)]

R - Electrical resistance , [Ohm·m]

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

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