

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 40KH15N7G7F2MS (40X15H7Г7Φ2MC).

Grade :	40KH15N7G7F2MS (40X15H7Г7Φ2MC) (ЭИ388 4X15H7Г7Φ2MC)
Classification :	High alloy high-temperature steel
Equivalent grades:	Is absent

Chemical composition in % for grade 40KH15N7G7F2MS (40X15H7Г7Φ2MC)

C	Si	Mn	Ni	S	P	Cr	Mo	W	V	Cu
0.38 - 0.47	0.9 - 1.4	6 - 8	6 - 8	max 0.02	max 0.035	14 - 16	0.65 - 0.95	max 0.2	1.5 - 1.9	max 0.3

Mechanical properties under T=20°C for grade 40KH15N7G7F2MS (40X15H7Г7Φ2MC)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 5949-75	Ø 60		880	590	15	15	290	Guenching 1170 - 1190°C, water, Ageing 780 - 820°C, 8 - 10h, air,

Physical properties for grade 40KH15N7G7F2MS (40X15H7Г7Φ2MC)

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	1.85			7800		
100		17	14	7770		
200	1.87	17.7	16	7720		
300	1.57	18.4	18	7680		
400	1.47	19.1	20	7630		
500	1.47	20.5	22	7580		
600	1.47	20.8	24	7530		
700	1.18		26			
800	1.18					
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

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]

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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