

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 15KHMFKR (15XMΦKP).

Grade :	15KHMFKR (15XMΦKP)
Classification :	Low alloy high-temperature steel
Equivalent grades:	Is absent

Chemical composition in % for grade 15KHMFKR (15XMΦKP)

C	Si	Mn	S	P	Cr	Mo	V	Co	B
0.12 - 0.18	0.17 - 0.37	0.4 - 0.7	max 0.03	max 0.03	1 - 1.3	0.9 - 1.2	0.2 - 0.32	1.3 - 1.5	0.006 - 0.01

Temperature of critical points for grade 15KHMFKR (15XMΦKP).

, Ac ₃ (Ac _m) = 980 - 990
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Mechanical properties under T=20°C for grade 15KHMFKR (15XMΦKP)

Assortment	Dimension	Direct.	σ _B	σ _T	δ ₅	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
		longitudinal	600	450	15	40	600	
		tangent	575	425	11	32	450	

Physical properties for grade 15KHMFKR (15XMΦKP)

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	2.19			7850		
100	2.15	12.1	32.2			
200	2.085	13.1	31.8			
300	2	14.1	31.4			
400	1.925	15.1	31			
600	1.71	15.4	28.9			
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]
- δ₅ - 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 - 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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