

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 9KH2MF (9X2MΦ).

Grade :	9KH2MF (9X2MΦ)
Classification :	Tool steel for roller
Equivalent grades:	Is absent

Chemical composition in % for grade 9KH2MF (9X2MΦ)

C	Si	Mn	Ni	S	P	Cr	Mo	V
0.85 - 0.95	0.25 - 0.5	0.2 - 0.7	max 0.5	max 0.03	max 0.03	1.7 - 2.1	0.2 - 0.3	0.1 - 0.2

Temperature of critical points for grade 9KH2MF (9X2MΦ).

$A_{c1} = 748$, $A_{c3}(A_{cm}) = 784$, $A_{r3}(A_{rcm}) = 685$, $A_{r1} = 640$, $Mn = 175$

Technological properties for grade 9KH2MF (9X2MΦ)

Weldability:	is not used.
Flakes :	predisposed
Temper brittleness:	predisposed

Physical properties for grade 9KH2MF (9X2MΦ)

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				7840		
100			37		440	
200			34		460	
300			32		500	
400			32		570	
500			32		680	
600			30		800	
700			23		940	
800			20		1100	
900			14		500	
1000					500	
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

Specification :**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).
 Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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