

Database of Steel and Alloy (Marochnik)

splat.kharkov.com/en

[Home](#) [European steel grades](#) [Steel and Alloy](#) [Search](#) [Equivalent grades](#) [Grading](#) [GOST Standard](#) [Contacts](#)

YOU HERE: [Steel and Alloy](#) -> [Tool steel](#)

Characteristics for grade R9K10 (P9K10).

Grade :	R9K10 (P9K10)
Classification :	High speed tool steel
Equivalent grades:	Is absent

Chemical composition in % for grade R9K10 (P9K10)

C	Si	Mn	Ni	S	P	Cr	Mo	W	V	Co
0.9 - 1	max 0.5	max 0.4	max 0.4	max 0.03	max 0.03	3.8 - 4.4	max 1	9 - 10.5	2 - 2.6	9 - 10.5

Temperature of critical points for grade R9K10 (P9K10).

$Ac_1 = 840$, $Ac_3(Ac_m) = 870$, $Ar_1 = 785$

Brinell hardness for R9K10 (P9K10) (annealing) ,

HB 10⁻¹ = 269 MPa

Physical properties for grade R9K10 (P9K10)

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				8300		

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]

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

[Top](#)

The entire risk as to use of the Database of Steel and Alloy (Marochnik) content is assumed by you the user

