

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](#) -> [Cast iron](#)

Characteristics for grade CHVG45 (ЧВГ45).

Grade :	CHVG45 (ЧВГ45)
Classification :	Vermicular graphite iron for castings
Equivalent grades:	Is absent

Chemical composition in % for grade CHVG45 (ЧВГ45)

C	Si	Mn	Ni	S	P	Cr	Mo	Cu	Mg	P3M
3.1 - 3.5	2 - 2.5	0.8 - 1.2	0.8 - 1.2	max 0.025	max 0.05	max 0.3	0.2 - 0.4	0.8 - 1	0.02 - 0.028	0.1 - 0.2

Mechanical properties under T=20°C for grade CHVG45 (ЧВГ45)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Casting, GOST 28394-89			450	380	0.8			

Brinell hardness for CHVG45 (ЧВГ45) , GOST 28394-89

HB 10⁻¹ = 190 - 250 MPa

Physical properties for grade CHVG45 (ЧВГ45)

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	1.55		39	7300		
100		13				

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 $20^{\circ} - T$), [1/Grade]
- λ - Thermal (heat) conductivity coefficient, [Watt/(m·Grade)]
- ρ - Density, [kg/m³]
- C** - Specific heat (range $20^{\circ} - T$), [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](#)

© 2003 - 2013 All rights reserved. [About program.](#)

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

