

Database of Steel and Alloy (Marochnik)

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Characteristics for grade VCH45 (B445).

Grade :	VCH45 (B445)
Classification :	Cast iron with spheroidal graphite
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Chemical composition in % for grade VCH45 (B445)

C	Si	Mn	S	P	Cr
2.7 - 3.8	0.5 - 2.9	0.3 - 0.7	max 0.02	max 0.1	max 0.1

Mechanical properties under T=20°C for grade VCH45 (B445)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Casting, GOST 7293-85			450	310	10			

Brinell hardness for VCH45 (B445) , GOST 7293-85	HB 10 ⁻¹ = 140 - 225 MPa
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Equivalent steels for grade VCH45 (B445)

Warning! Indicated both exact and nearest equivalents.

USA	Japan	France	England	European	Italy	Belgium	Spain	China	Bulgaria	Hungary	Poland	Austria	Australia	Inter	India	Holland	Luxembourg	COPANT
-	JIS	AFNOR	BS	EN	UNI	NBN	UNE	GB	BDS	MSZ	PN	ONORM	AS	ISO	IS	NEN	-	COPANT
65-45-12	FCD450	FGS400-12 FGS450-10	420/12 450/10	EN-GJS-450-10 EN-JS1040	GS400-12	FNG42-12	FGE42-12	QT450-10	400-12	GoV40	ZS4012	SG42	400-12	450-10	SG400/12	GN42	FNG42-12	FMNP45007

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 / m ²]
HB	- Brinell hardness , [MPa]

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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