

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](#) -> [Structural steel](#)

Characteristics for grade 38KH2YU (38X2Ю).

Grade :	38KH2YU (38X2Ю) (38XЮ)
Classification :	Alloy structural steel
Equivalent grades:	Go here

Chemical composition in % for grade 38KH2YU (38X2Ю)

C	Si	Mn	S	P	Cr	Al
0.35 - 0.43	0.2 - 0.4	0.2 - 0.5	max 0.035	max 0.035	1.5 - 1.8	0.5 - 0.8

Temperature of critical points for grade 38KH2YU (38X2Ю).

$Ac_1 = 810$, $Ac_3(Ac_m) = 880$

Mechanical properties under T=20°C for grade 38KH2YU (38X2Ю)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 4543-71	Ø 30		880	735	10	45	780	Guenching 930°C, water, Drawing 630°C, water,

Brinell hardness for 38KH2YU (38X2Ю) (annealing) ,	HB 10 ⁻¹ = 229 MPa
--	-------------------------------

Technological properties for grade 38KH2YU (38X2Ю)

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

Equivalent steels for grade 38KH2YU (38X2Ю)

Warning! Indicated both exact and nearest equivalents.

Germany	Czechia
DIN, WNr	CSN
1.8504	14340
34CrAl6	

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]

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).
Helpful 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

