

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 05kp (05кп).

Grade :	05kp (05кп)
Classification :	High quality structural carbon steel
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Chemical composition in % for grade 05kp (05кп)

C	Si	Mn	Ni	S	P	Cr	Cu	As
max 0.06	max 0.03	max 0.4	max 0.3	max 0.04	max 0.035	max 0.1	max 0.3	max 0.08

Temperature of critical points for grade 05kp (05кп).

$Ac_1 = 720$, $Ac_3(Ac_m) = 880$, $Ar_1 = 700$

Mechanical properties under T=20°C for grade 05kp (05кп)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet hotrolled	4		255-370		28			As-delivered state

Brinell hardness for 05kp (05кп) (annealing) ,

HB 10⁻¹ = 111 - 131 MPa

Technological properties for grade 05kp (05кп)

Weldability:	without limitations.
Flakes :	not predisposed
Temper brittleness:	not predisposed

Equivalent steels for grade 05kp (05кп)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	England	European	Italy	Spain	Bulgaria	Hungary	Poland	Romania	Czechia	Austria	Australia
-	DIN,WNr	JIS	BS	EN	UNI	UNE	BDS	MSZ	PN	STAS	CSN	ONORM	AS
1005 G10050 G10060	1.0314 Ck5 D5-2 D6-2 DG-2	SWRM6	1CR 2CR	1.0312 1.0314 1.0338 C2C DC04 DC05	3CD5 3CD6	AP04	05KP	ELFE	05XA	A5	11300 11301	UC6	CA4

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 ia annealing

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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