

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](#) -> [Aluminium alloy](#)

Characteristics for grade AK8 (AK8).

Grade :	AK8 (AK8)(1380)
Classification :	Aluminium wrought alloys
Equivalent grades:	Go here

Chemical composition in % for grade AK8 (AK8)

Fe	Si	Mn	Cr	Ti	Al	Cu	Mg	Zn	Impurity	-
max 0.7	0.5 - 1.2	0.4 - 1	max 0.1	max 0.15	90.8 - 95	3.9 - 5	0.2 - 0.8	max 0.25	other, each 0.05; all 0.15	Ti+Zr < 0.2

Comment: **Al** is a basis; the percentage of **Al** is given approximately.

Mechanical properties under T=20°C for grade AK8 (AK8)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 21488-97			430-450		8-10			Quenching and artificial aging
Bar, GOST 51834-2001			460	335-365	8			Quenching and artificial aging
Profile			490	450	7	15		Hardening and ageing

Brinell hardness for AK8 (AK8) ,	HB 10 ⁻¹ = 110 - 120 MPa
Brinell hardness for AK8 (AK8) (quenching, ageing) ,	HB 10 ⁻¹ = 135 MPa

Physical properties for grade AK8 (AK8)

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	0.74			2800		43
100		22.5	168		838	

Equivalent steels for grade AK8 (AK8)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	England	European	Italy	Inter
-	DIN, WNr	JIS	BS	EN	UNI	ISO
AA2014 AA2214	3.1255 AlCuSiMn	2014	L97 L98	ENAW-2014 ENAW-AlCu4SiMg	P-AlCu4.4SiMnMg	2014 AlCu4SiMg

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]

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/m ³]
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 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

[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

