

Database of Steel and Alloy (Marochnik)

splav.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 AD33 (АД33).

Grade :	AD33 (АД33) (1330)
Classification :	Aluminium wrought alloys
Equivalent grades:	Go here

Chemical composition in % for grade AD33 (АД33)

Fe	Si	Mn	Cr	Ti	Al	Cu	Mg	Zn	Impurity
max 0.7	0.4 - 0.8	max 0.15	0.04 - 0.35	max 0.15	96 - 98.61	0.15 - 0.4	0.8 - 1.2	max 0.25	other, each 0.05; all 0.15

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

Mechanical properties under T=20°C for grade AD33 (АД33)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 21488-97			175-265	110-225	10-15			Hardening and ageing
Profile, GOST 8617-81	10 - 100		265	225	10			Quenching and artificial aging
Profile, GOST 8617-81	to 10		255	225	6			Quenching and artificial aging
Profile, GOST 8617-81			176	108	15			

Brinell hardness for AD33 (АД33) ,	HB 10⁻¹ = 80 MPa
---	------------------------------------

Physical properties for grade AD33 (АД33)

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	0.71			2710		43.8
100		23.2	151		945	

Equivalent steels for grade AD33 (АД33)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	European	Inter
-	DIN, WNr	JIS	EN	ISO
AA6061	3.3211 AlMg1SiCu	6061	ENAW-6061 ENAW-AlMg1SiCu	6061 AlMg1SiCu

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

