

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](#) -> [Zinc](#)

Characteristics for grade TSAM9-1.5 (ЦАМ9-1.5).

Grade :	TSAM9-1.5 (ЦАМ9-1.5)
Classification :	Zinc antifriction alloys
Equivalent grades:	Is absent

Chemical composition in % for grade TSAM9-1.5 (ЦАМ9-1.5)

Fe	Si	Al	Cu	Pb	Mg	Zn	Sn	Cd	Impurity
max 0.15	max 0.1	9 - 11	1 - 2	max 0.03	0.03 - 0.06	86.59 - 89.97	max 0.01	max 0.02	all 0.35

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

Mechanical properties under T=20°C for grade TSAM9-1.5 (ЦАМ9-1.5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
, GOST 21437-95			294		10			

Brinell hardness for TSAM9-1.5 (ЦАМ9-1.5) , GOST 21437-95	HB 10 ⁻¹ = 85 MPa
---	------------------------------

Limiting operating condition of the material TSAM9-1.5 (ЦАМ9-1.5)

Load	Speed	Load * Speed	Temperature
MPa	m/s	MPa * m/s	Grade
9.8	8		80
19.5	10		100

Technological properties of the material TSAM9-1.5 (ЦАМ9-1.5) .

Melting temperature :	378 - 410 °C
Linear shrinkage :	1.2 %

Physical properties for grade TSAM9-1.5 (ЦАМ9-1.5)

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	0.9		100.8	6100		
100		27				

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

