

Database of Steel and Alloy (Marochnik)

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Characteristics for grade TS0A (Ц0А).

Grade :	TS0A (Ц0А)
Classification :	Primary zinc
Equivalent grades:	Is absent

Chemical composition in % for grade TS0A (Ц0А)

Fe	Al	Cu	As	Pb	Zn	Sn	Cd	Impurity
max 0.003	max 0.005	max 0.001	max 0.0005	max 0.01	min 99.98	max 0.001	max 0.003	all 0.02

Mechanical properties under T=20°C for grade TS0A (Ц0А)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
casted			120-140		0.3-0.5	30		
deformed			120-170		40-50	60-80		

Brinell hardness for TS0A (Ц0А) , casted	HB 10 ⁻¹ = 30 - 40 MPa
Brinell hardness for TS0A (Ц0А) , deformed	HB 10 ⁻¹ = 35 - 45 MPa

Technological properties of the material TS0A (Ц0А) .

Melting temperature :	419.5 °C
Forging temperature :	150 - 170 °C
Casting temperature :	430 - 450 °C
Linear shrinkage :	1.57 %

Physical properties for grade TS0A (Ц0А)

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	0.95			7130		
100		39.5				

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

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