

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 16G2AF (16Г2АФ).

Grade :	16G2AF (16Г2АФ)
Substitute:	15Г2АФ, 14Г2АФ
Classification :	Low alloy structural steel for welding construct
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Chemical composition in % for grade 16G2AF (16Г2АФ)

C	Si	Mn	Ni	S	P	Cr	V	N	Cu	As
0.14 - 0.2	0.3 - 0.6	1.3 - 1.7	max 0.3	max 0.04	max 0.035	max 0.4	0.08 - 0.14	0.015 - 0.025	max 0.3	max 0.08

Temperature of critical points for grade 16G2AF (16Г2АФ).

$Ac_1 = 723$, $Ac_3(Ac_m) = 907$, $Mn = 400$
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Mechanical properties under T=20°C for grade 16G2AF (16Г2АФ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet, GOST 19282-73	5 - 9		600	450	20			

Technological properties for grade 16G2AF (16Г2АФ)

Weldability:	without limitations.
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Equivalent steels for grade 16G2AF (16Г2АФ)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	Canada	European	Italy	Spain	China	Sweden	Bulgaria	Hungary	Poland	Romania	Czechia	Switzerland
-	DIN, WNr	JIS	AFNOR	BS	HG	EN	UNI	UNE	GB	SS	BDS	MSZ	PN	STAS	CSN	SNV
A633Gr.E K02002 K12202 K12437	1.8902 P460N S420N StE420	SM490A SM490B SM490C SM490YA SM490YB STK540	E420RIFP FeE420KGN S420N	50E 50EE S355NL S420N	400WT	1.8902 S420N	FeE420KG FeE420KW	AE420KG S420N	Q420C	2143	09G2BFBFF S420N	58C E420D S420N	18G2AV	K510	13220	StE43

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 is annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more than 2500 steels and alloys (stainless steel, alloy steel, carbene steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).
 Helpful for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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