

MATERIAL NUMBER 1.1172 · CLASS 1.1

35KhGFL

Material no. 1.1172

also listed as C35EC

Chemical composition, mechanical and physical property values, and 20 standard designations from 5 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 20 in 5 regions	PROPERTY VALUES 16 on file
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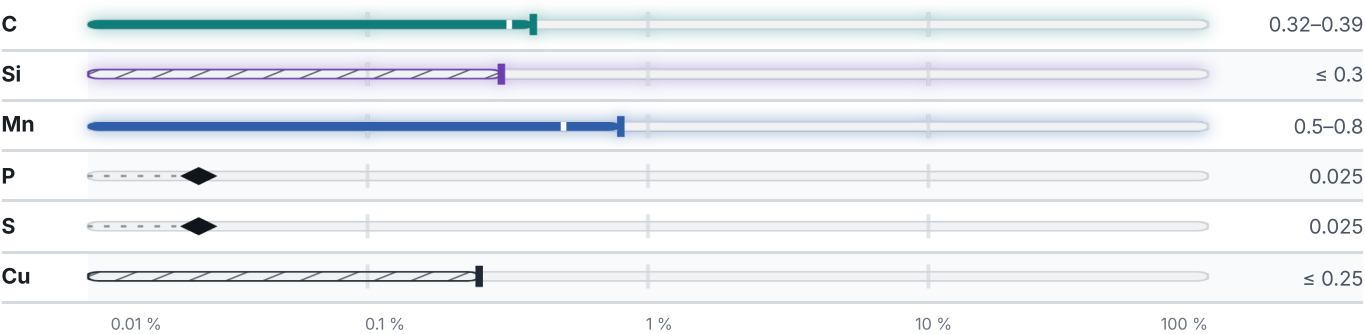
Chemical composition

Mass fraction in %

What this alloy is



Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni, Cr, Mo.

Mechanical properties

23 values across 4 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	HB
Pipe, GOST 8731-87	510	294	17	–	–
Rolled stock cold-worked , GOST 1050-88	590	–	6	35	–
Rolled stock annealed , GOST 1050-88	470	–	15	45	–
Band annealed , GOST 2284-79	390–640	–	16	–	–
Band cold-worked , GOST 2284-79	640–930	–	–	–	–
Sheet GOST 4041-71	–	–	–	–	163
Pipe GOST 8731-87	–	–	–	–	187
Rolled stock GOST 1050-88	–	–	–	–	207
CONDITION · DIMENSION	RM N/mm ²		A5 %	Z %	
4 - 14	480–640			22	
CONDITION · DIMENSION	RM N/mm ²		A5 %	Z %	
Bar cold-drawn , GOST 10702-78	590			45	
NORMALIZING	RM N/mm ²	RE N/mm ²	A5 %	Z %	
to 80	530	315	20		45

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.826	206	–	–	–	–
100	7.804	197	12	49	469	251
200	7.771	187	12.9	49	490	321
300	7.737	156	13.6	47	511	408
400	7.7	168	14.2	44	532	511
500	7.662	–	14.6	41	553	629
600	7.623	–	15	38	578	759
700	7.583	–	15.2	35	611	922
800	7.6	–	12.7	29	708	1112
900	7.549	–	13.9	28	699	1156

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	730	°C
Transformation point Ac3	810	°C
Transformation point Ar3	796	°C
Transformation point Ar1	680	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

20 designations · 5 documented as identical

Russia / CIS		14	Europe		2
35	gost		C35EC	This grade's own name	din-en
35GS	gost		Cq 35	This grade's own name	din-en
35KHGF	gost		United States		
35KhGFL	gost		2		
35KhGL	gost		G10350	This grade's own name	uns
35KHGSL	gost		1035	This grade's own name	aisi-sae
35KHGSA	gost		China		
35KhMFA	gost		1		
35KHMFL	gost		35	This grade's own name	gb
35KHNL	gost		Australia / New Zealand		
35NGML	gost		1		
CHVG35	gost		1030		as-nzs
VCH35	gost				
A35E	gost				

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about 35KhGFL

Quotation, availability, mill certificate or a technical question — directly on the material page.

[Start an enquiry](#)

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.1172	Aug 20, 2026