

MATERIAL NUMBER 1.0479 · CLASS 1.0

12Mn

Material no. 1.0479

also listed as 13Mn6

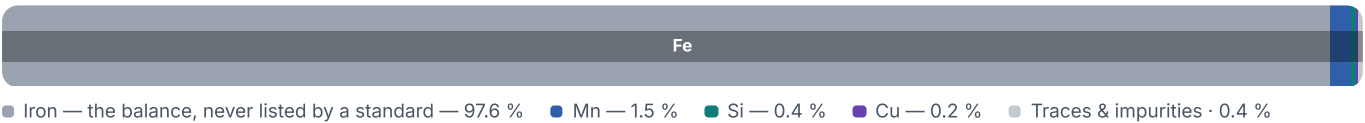
Chemical composition, mechanical and physical property values, and 8 standard designations from 7 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 8 in 7 regions	PROPERTY VALUES 16 on file
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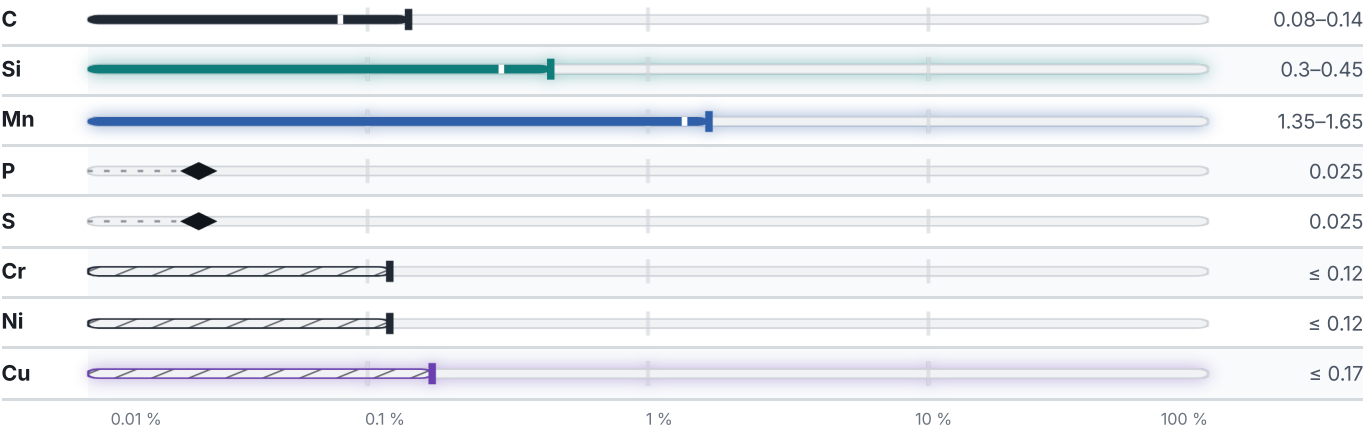
Chemical composition

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: Mo.

Mechanical properties

10 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	KCU kJ/m ²
Sheet, GOST 5520-79	430–490	265–345	21	590–640
Pipe, GOST 10705-80	490	343	20	–

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
to 250	430	265	21

Physical properties

8 values

CONDITION · DIMENSION	ALPHA 10 ^{^-6} /K
100	11.4
200	12.2
300	12.6
400	13.2
500	13.8

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	725	°C
Transformation point Ac3	860	°C
Transformation point Ar3	780	°C
Transformation point Ar1	625	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

8 designations · 1 documented as identical

Russia / CIS	2	Europe	1
09G2S	gost	13Mn6	This grade's own name din-en
09Г2C	gost	Japan	1
		SB49	jis

China	1	Romania	1
12Mn	gb	9SiMn16	stas
Hungary	1	Bulgaria	1
VH2	msz	09G2S	bds

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 12Mn
Quotation, availability, mill certificate or a technical question — directly on the material page.

Start an enquiry

DATASHEET ONLINE View the material page	GRADE SEARCH Search all grades	MATERIAL NO. 1.0479	ISSUED Aug 20, 2026
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