

3M481

also listed as 37KH12N8G8MFB

Chemical composition, mechanical and physical property values, and 4 standard designations from 1 regions.

OTHER DESIGNATIONS	PROPERTY VALUES
4 in 1 regions	12 on file

Chemical composition

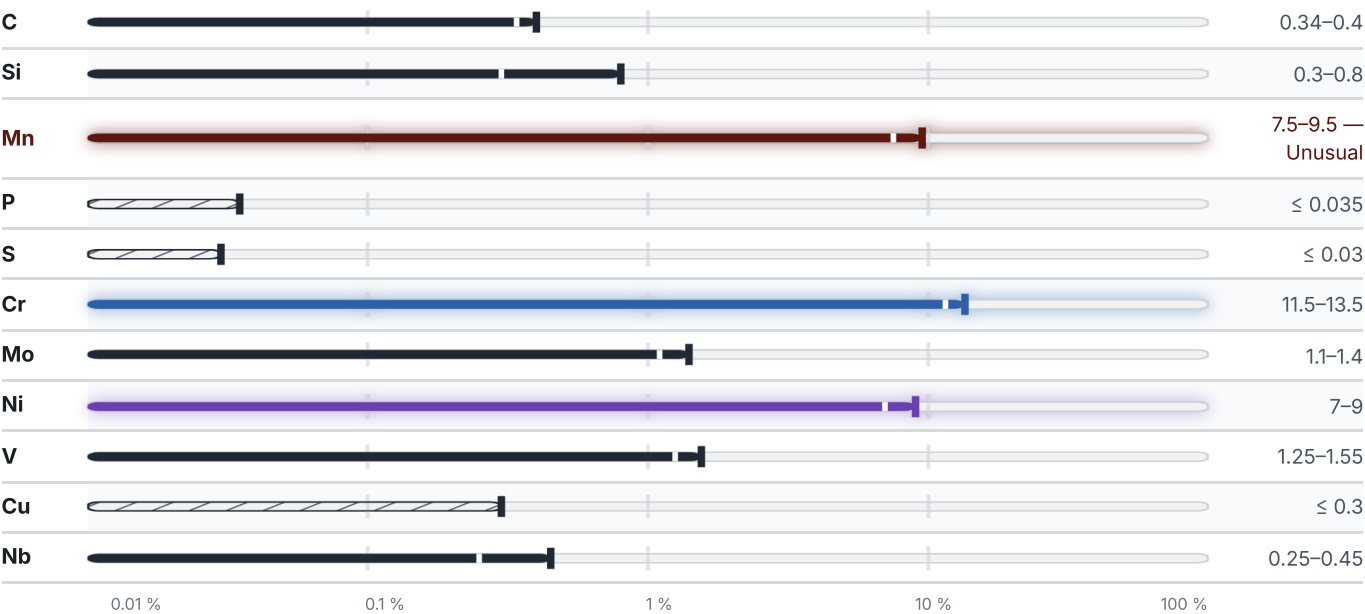
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 66.7 % ● Cr — 12.5 % ● Mn — 8.5 % ● Ni — 8 % ● Traces & impurities · 4.3 %

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no

transformation temperature is predicted here.

Mechanical properties

6 values across 2 conditions

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Heating 1140 - 1160°C, 1h,Cooling water, Ageing 660 - 790°C, 10 - 16h, air	1000	600	20	25	350
CONDITION · DIMENSION	HB				
37KH12N8G8MFB (37X12H8Г8МФБ) (annealing) , Bar GOST 18907	269				

Physical properties

1 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.85	174	–	–	740
100	–	–	15.9	17.2	850
200	–	160	17.1	18.5	900
300	–	150	18.2	19.7	950
400	–	143	19.2	21.4	1010
500	–	135	20.3	23	1100
600	–	128	21.2	24.8	1150
700	–	125	22.2	25.9	1200
800	–	–	23.2	27.2	–
900	–	–	24.2	29.3	–

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	

Designations across standards

4 designations · 1 documented as identical

Russia / CIS	4
37KH12N8G8MFB This grade's own name	gost
37X12H8Г8МФБ	gost
4X12H8Г8МФБ	gost
ЭИ481	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 3N481
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.
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ISSUED
Aug 15, 2026