

3W712M

also listed as 12Kh2NVFMA

Chemical composition, mechanical and physical property values, and 3 standard designations from 1 regions.

OTHER DESIGNATIONS	PROPERTY VALUES
3 in 1 regions	11 on file

Chemical composition

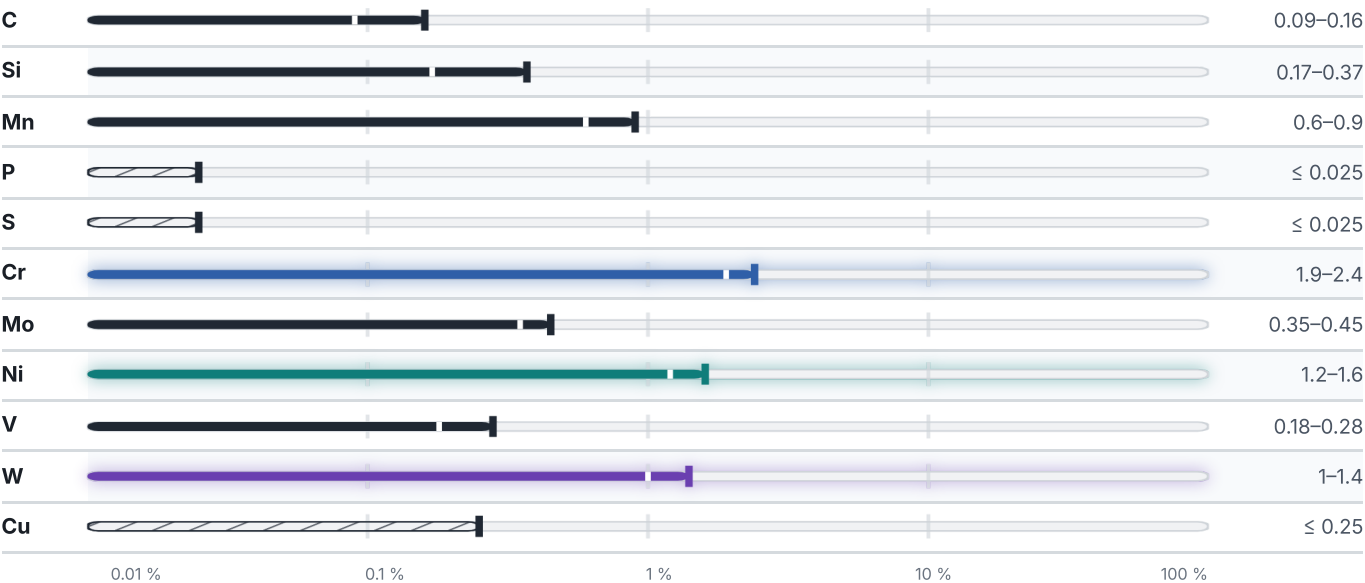
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 93.2 % ● Cr — 2.2 % ● Ni — 1.4 % ● W — 1.2 % ● Traces & impurities · 2.1 %

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

computed from composition · °C

PREDICTED AE3 797 °C	PREDICTED AE1 751 °C	PREDICTED ACM 447 °C	PREDICTED BS 472 °C
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Mechanical properties

15 values across 4 conditions

CONDITION · DIMENSION	RM N/mm ²	A5 %
Sheet trick, GOST 11269-76	490–740	15
Sheet thin, GOST 11268-76	490–740	15

CONDITION · DIMENSION	RM N/mm ²	A5 %	KCU kJ/m ²
Sheet trick, GOST 11269-76	980	11	590
Sheet thin, GOST 11268-76	980	11	—

QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 15	980	885	12	55	785

CONDITION · DIMENSION	HB
12Kh2NVFMA (12X2HBΦMA) (normalize) , Sheet trick GOST 11269-76	156–217

Designations across standards

3 designations · 1 documented as identical

Russia / CIS	3
12Kh2NVFMA This grade's own name	gost
12X2HBΦMA	gost
ЭИ712М	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 ЭИ712М

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

DATASHEET ONLINE

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MATERIAL NO.

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ISSUED

Aug 15, 2026