

ЭП503

also listed as 12KH2MV8FB

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

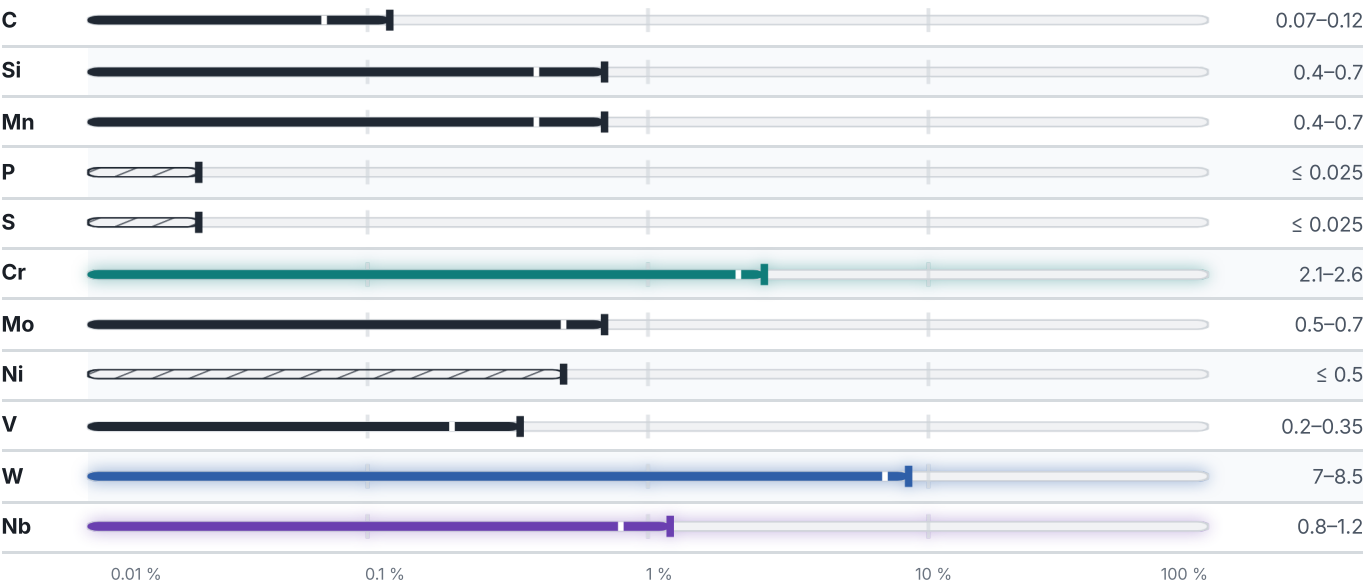
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 86.3 % ● W — 7.8 % ● Cr — 2.4 % ● Nb — 1 % ● Traces & impurities · 2.6 %

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 841 °C	PREDICTED AE1 782 °C	PREDICTED ACM 428 °C	PREDICTED BS 481 °C
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Mechanical properties

5 values across 1 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 32 × 6	910	750	16	47	900

Physical properties

0 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	8.01	—	—	24.3	410
100	—	217	10.25	—	—
200	—	209	11.6	—	—
300	—	204	11.6	—	—
400	—	188	11.6	—	—
500	—	172	13.85	—	—
600	—	157	12.7	—	—
700	—	142	14.95	—	—
800	—	132	10.5	—	—
900	—	124	13.85	—	—

Designations across standards

3 designations · 1 documented as identical

Russia / CIS	3
12KH2MV8FB This grade's own name	gost
12X2MB8ΦБ	gost
ЭП503	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 ЭП503

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

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MATERIAL NO.

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ISSUED

Aug 15, 2026