

MATERIAL NUMBER 1.7767 · CLASS 1.7

K31830

Material no. 1.7767

also listed as 12CrMoV12-10

Chemical composition, mechanical and physical property values, and 4 standard designations from 2 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 4 in 2 regions	PROPERTY VALUES 16 on file
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Chemical composition

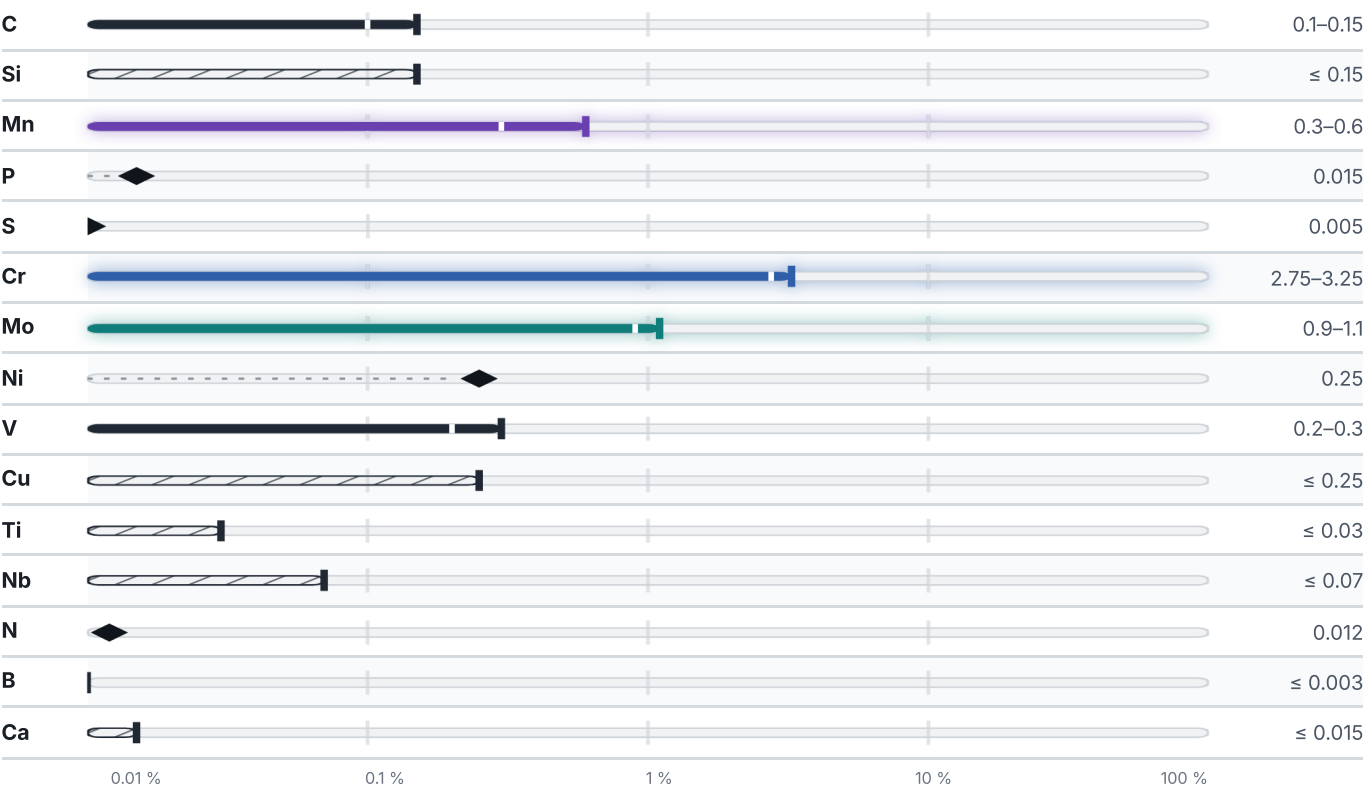
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 94.4 % ● Cr — 3 % ● Mo — 1 % ● Mn — 0.4 % ● Traces & impurities · 1.2 %

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 816 °C	PREDICTED AE1 790 °C	PREDICTED ACM 449 °C	PREDICTED BS 448 °C
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Mechanical properties

6 values across 1 conditions

CONDITION · DIMENSION	REH N/mm²	RM N/mm²
≤ 60	455	600–780
60 – 150	435	590–770
150 – 250	415	580–760

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Designations across standards

4 designations · 3 documented as identical

United States	3	Europe	1
K31390 This grade's own name	uns	12CrMoV12-10 This grade's own name	din-en
K31830 This grade's own name	uns		
K31835	uns		

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 K31830

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	1.7767	Aug 20, 2026