SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.8838 · CLASS 1.8

1.8838

Chemical composition, mechanical and physical property values, and 10 standard designations from 5 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm³	10 in 5 regions	15 on file

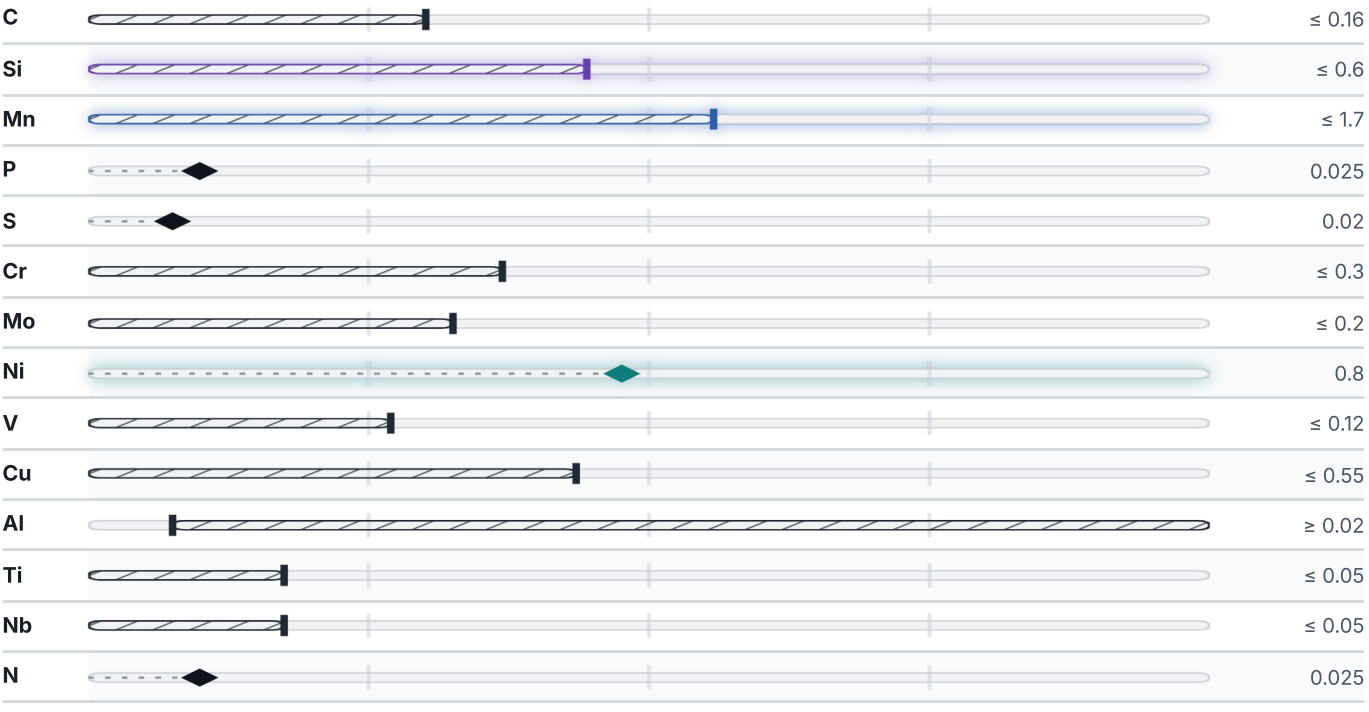
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 95.4 % · Mn — 1.7 % · Ni — 0.8 % · Si — 0.6 % · Traces & impurities · 1.5 %

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	PREDICTED AE1	PREDICTED ACM	PREDICTED BS
814 °C	708 °C	405 °C	538 °C

Mechanical properties

11 values across 1 conditions

CONDITION · DIMENSION	REH N/mm²	RM N/mm²
≤ 16	460	–
16 – 40	440	–
≤ 40	–	540–720
40 – 63	430	530–710
63 – 80	410	510–690
80 – 100	400	500–680
100 – 120	385	490–660

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Designations across standards

10 designations · 1 documented as identical

Europe 4

FeE460KTTM	din-en
S460ML This grade's own name	din-en
TStE 460 TM	din-en
TStE460	din-en

Italy 3

FeE460KGTM	uni
FeE460KT	uni
FeE460KTTM	uni

United States 1

A572Gr.65	aisi-sae

United Kingdom 1

55EE	bs

France 1

E460FP	afnor

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 1.8838

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	1.8838	Aug 20, 2026