

MATERIAL NUMBER 1.8523 · CLASS 1.8

HCM3

Material no. 1.8523

also listed as 39CrMoV13-9

Chemical composition, mechanical and physical property values, and 14 standard designations from 4 regions.

DENSITY

7.72 g/cm³

OTHER DESIGNATIONS

14 in 4 regions

PROPERTY VALUES

9 on file

Chemical composition

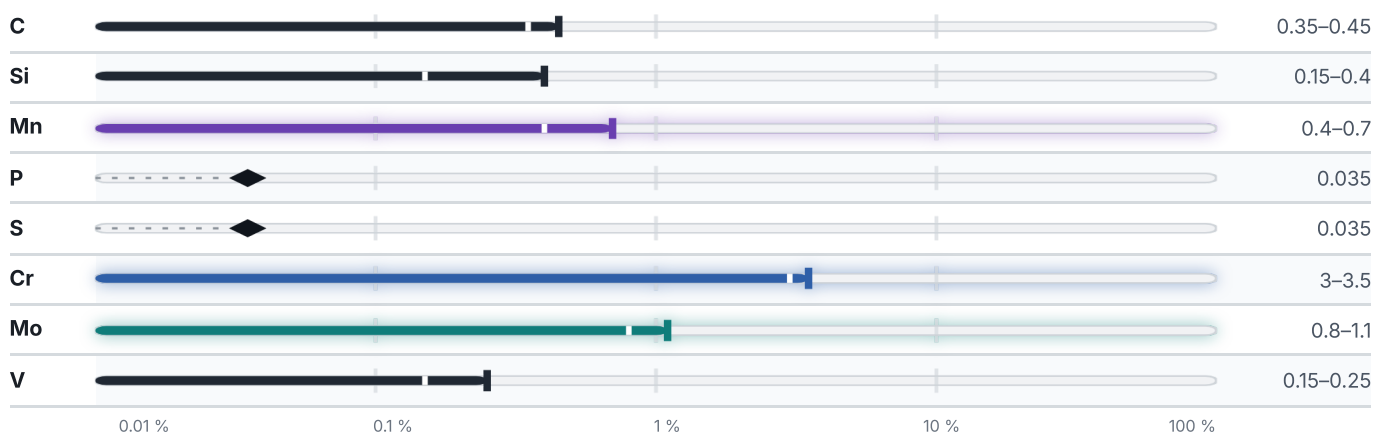
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 94.3 % ● Cr — 3.3 % ● Mo — 1 % ● Mn — 0.6 % ● Traces & impurities · 0.9 %

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

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni.

Mechanical properties

9 values across 2 conditions

QUENCHED AND TEMPERED	RM N/mm ²	A %
16 – 40	950–1150	11
40 – 100	900–1100	13
100 – 160	870–1070	14
160 – 250	800–1000	15
SOFT ANNEALED		HB
Soft annealed		248

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.72	g/cm ³

Designations across standards

14 designations · 5 documented as identical

United Kingdom	9	Europe	3
3S132 This grade's own name	bs	1.8523	din-en
3S132D	bs	39CrMoV13-9 This grade's own name	din-en
40C	bs	40CrMoV13-9 This grade's own name	din-en
897M39	bs		
EN40 C This grade's own name	bs	United Kingdom / France	1
HCM3	bs	S134 This grade's own name	bsi-afnor
S132	bs		
S133	bs	Italy	1
S134	bs	36CrMoV12	uni

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 HCM3

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	1.8523	Aug 20, 2026