

MATERIAL NUMBER 1.8507 · CLASS 1.8

905M31

Material no. 1.8507

also listed as 34CrAlMo5

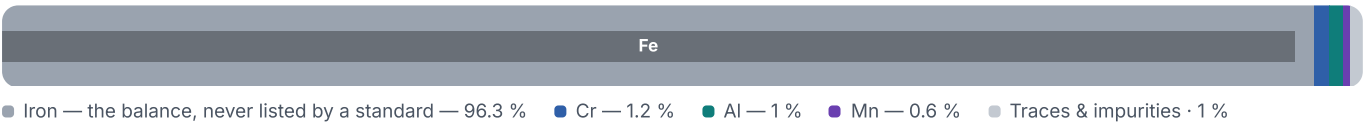
Chemical composition, mechanical and physical property values, and 14 standard designations from 8 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 14 in 8 regions	PROPERTY VALUES 9 on file
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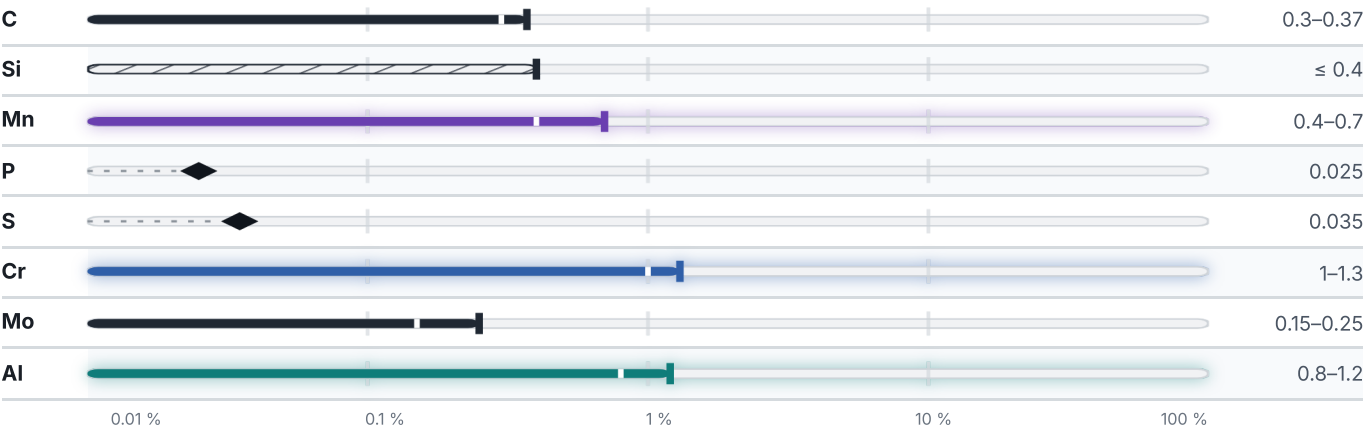
Chemical composition

Mass fraction in %

What this alloy is



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

5 values across 2 conditions

QUENCHED AND TEMPERED	RM N/mm ²	A %
16 – 40	800–1000	14
40 – 100	800–1000	14
SOFT ANNEALED		HB
Soft annealed		248

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Heat treatment

4 regimes

STEP	TEMPERATURE	MEDIUM
Nitriding	Temperature not stated	—
Soft annealing	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—

Designations across standards

14 designations · 3 documented as identical

United Kingdom	3	France	2
905M31	bs	30CAD6.12	afnor
905M39	bs	40CAD6.12	afnor
EN41B	bs		
Europe	2	Spain	2
34CrAlMo5 This grade's own name	din-en	-34CrAlMo5	une
34CrAlMo5-10 This grade's own name	din-en	F.1741	une
United States	2	Russia / CIS	1
K23510 This grade's own name	uns	38X2MIOA	gost
A355Cl.D	aisi-sae	Poland	1
		38HMJ	pn

Serbia	1
Č.4739	srps

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 905M31

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	1.8507	Aug 20, 2026