

Y45MnS

Chemical composition, mechanical and physical property values, and 1 standard designations from 1 regions.

OTHER DESIGNATIONS

1 in 1 regions

PROPERTY VALUES

5 on file

Chemical composition

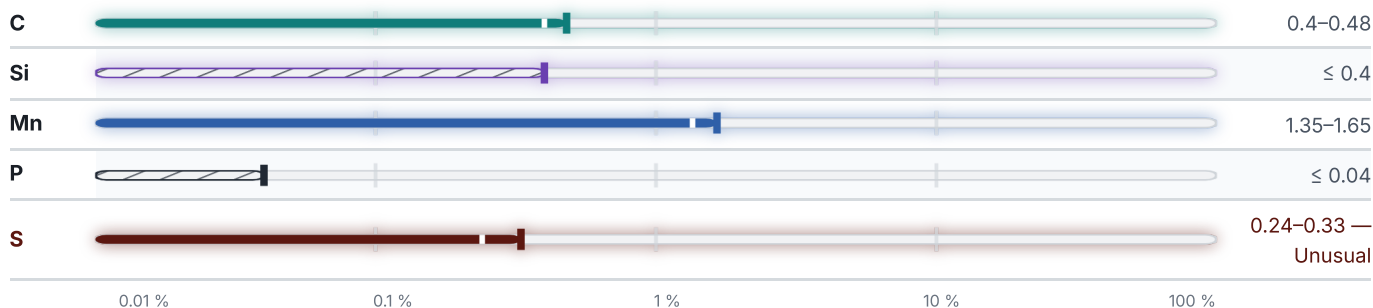
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 97.3 % ● Mn — 1.5 % ● C — 0.4 % ● Si — 0.4 % ● Traces & impurities · 0.3 %

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, Cr, Mo.

Mechanical properties

12 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	A %	HB
8 – 20	695–980	≥ 6	196–255
20 – 30	655–880	≥ 6	196–255

CONDITION · DIMENSION	RM N/mm ²	A %	HB
≥ 30	580–880	≥ 6	196–255

CONDITION · DIMENSION	RM N/mm ²	A %	HB
20 – 20	610–900	≥ 12	≤ 241

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
Tempering	Temperature not stated	—

Designations across standards

1 designations · 1 documented as identical

China	1
Y45MnS This grade's own name	gb

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 Y45MnS

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	—	Aug 15, 2026