

MATERIAL NUMBER 1.0980 · CLASS 1.0

SPFH590

Material no. 1.0980

also listed as QStE 420 TM

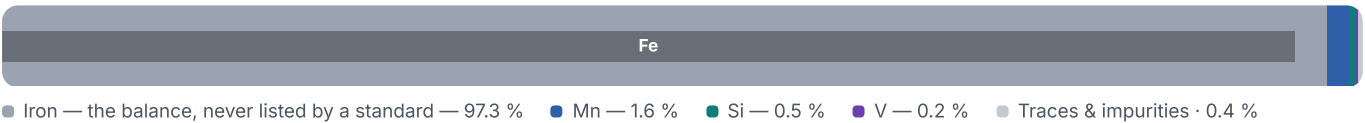
Chemical composition, mechanical and physical property values, and 11 standard designations from 8 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 11 in 8 regions	PROPERTY VALUES 10 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, Cr, Mo.

Mechanical properties

5 values across 2 conditions

CONDITION · DIMENSION	A80		A
	% · Lo = 80 mm		% · Lo = 5,65 √So
≤ 3	16		–
≥ 3	–		19
CONDITION · DIMENSION	RM	RE	A
	N/mm ²	N/mm ²	%
Plate/Sheet Hot-rolled	590	420	19–22

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

11 designations · 4 documented as identical

United States		3	France		1
Gr.60	aisi-sae		E420D		afnor
A1008 Grade 60 Class 1	This grade's own name	astm	International		1
A1008 Grade 60 Class 2	This grade's own name	astm			
Europe		2	FeE420		iso
QStE 420 TM	This grade's own name	din-en	Japan		1
S420MC	This grade's own name	din-en	SPFH590		jis
United Kingdom		1	Italy		1
HR50F45	bs		Fe420TM		uni
			Sweden		1
			2652		ss

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 SPFH590

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	1.0980	Aug 20, 2026