SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.2085 · CLASS 1.2

420FM

Material no. 1.2085

also listed as X33CrS16

Chemical composition, mechanical and physical property values, and 7 standard designations from 5 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm³	7 in 5 regions	8 on file

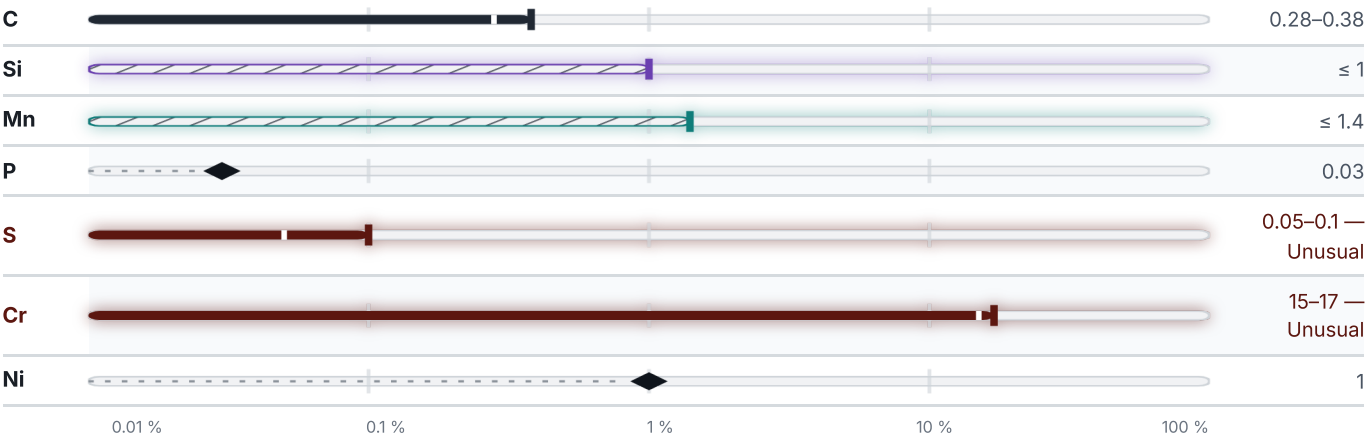
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 80.2 % · Cr — 16 % · Mn — 1.4 % · Si — 1 % · Traces & impurities · 1.4 %

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: Mo.

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Designations across standards

7 designations · 1 documented as identical

United States 3

S42020/S42023 przybliż.	uns
420F	aisi-sae
420FM	aisi-sae

Europe 1

X33CrS16 This grade's own name	din-en

France 1

Z33C16S	afnor

Japan 1

SUS420F przybliż.	jis

Poland 1

4H13S jako grupa	pn

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 420FM

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	1.2085	Aug 20, 2026