

MATERIAL NUMBER 1.0616 · CLASS 1.0

C86D

Material no. 1.0616

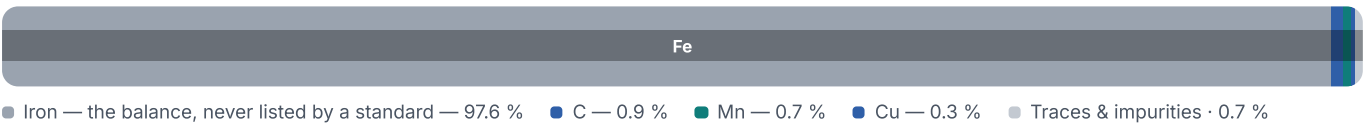
Chemical composition, mechanical and physical property values, and 14 standard designations from 8 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 14 in 8 regions	PROPERTY VALUES 17 on file
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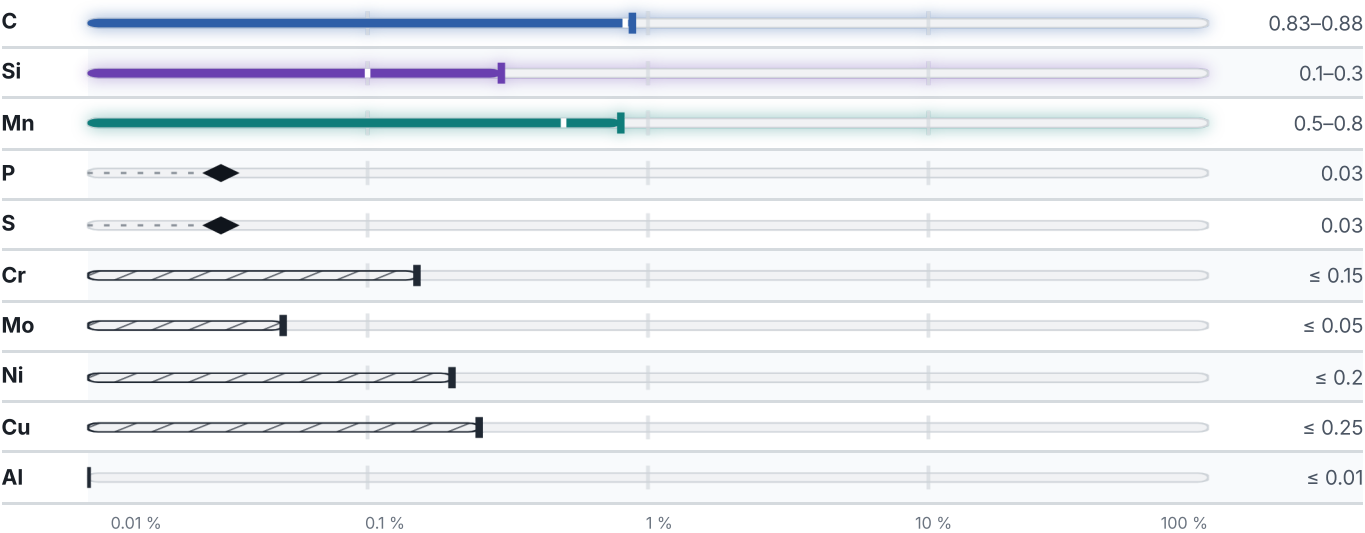
Chemical composition

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

9 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	A5 %	HB	
Band annealed , GOST 2283-79	740	10	–	
Band cold-worked , GOST 2283-79	740–1180	–	–	
(without heat treatment) , Rolled stock GOST 14959-79	–	–	302	
(heat treatment) , Rolled stock GOST 14959-79	–	–	269	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %
Rolled stock, GOST 14959-79	1130	980	8	30

Physical properties

7 values

CONDITION · DIMENSION			E GPa
20			191
PROPERTY		VALUE	UNIT
Density		7.85	g/cm³
Transformation point Ac1		720	°C
Transformation point Ac3		730	°C
Transformation point Ar1		700	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	is not used.	
Flake sensitivity	weakly predisposed	
Temper brittleness	not predisposed	

Designations across standards

14 designations · 5 documented as identical

United States		6	United Kingdom		2
G10800	This grade's own name	uns	080A83		bs
G10860	This grade's own name	uns	CS80		bs
1080	This grade's own name	aisi-sae	Europe		1
1085		aisi-sae			
1086	This grade's own name	aisi-sae	C86D	This grade's own name	din-en
1095		aisi-sae	Japan		1
			SUP4		jis

China	1	Brazil	1
85	gb	1080	abnt
Russia / CIS	1	Latin America	1
85	gost	1080	copant

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 C86D
Quotation, availability, mill certificate or a technical question — directly on the material page.

[Start an enquiry](#)

DATASHEET ONLINE View the material page	GRADE SEARCH Search all grades	MATERIAL NO. 1.0616	ISSUED Aug 20, 2026
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