SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.0616 · CLASS 1.0

080A83

Material no. 1.0616

also listed as C86D

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

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm³	14 in 8 regions	17 on file

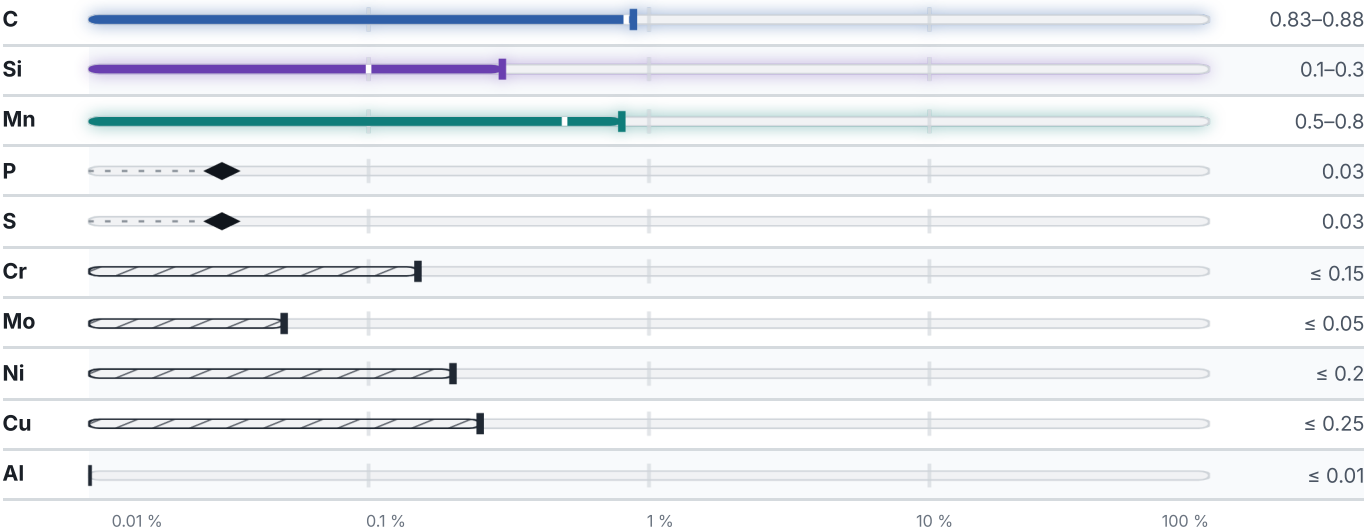
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 97.6 % · C — 0.9 % · Mn — 0.7 % · Cu — 0.3 % · Traces & impurities · 0.7 %

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/mm²	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/mm²	RE N/mm²	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

G10800 This grade's own name	uns
G10860 This grade's own name	uns
1080 This grade's own name	aisi-sae
1085	aisi-sae
1086 This grade's own name	aisi-sae
1095	aisi-sae

United Kingdom 2

080A83	bs
CS80	bs

Europe 1

C86D This grade's own name	din-en

Japan 1

SUP4	jis

China 1

85	gb

Russia / CIS 1

85	gost

Brazil 1

1080	abnt

Latin America 1

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.

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