

MATERIAL NUMBER 1.0443 · CLASS 1.0

SC46

Material no. 1.0443

also listed as H 300 PD

Chemical composition, mechanical and physical property values, and 39 standard designations from 14 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm ³	39 in 14 regions	14 on file

Chemical composition

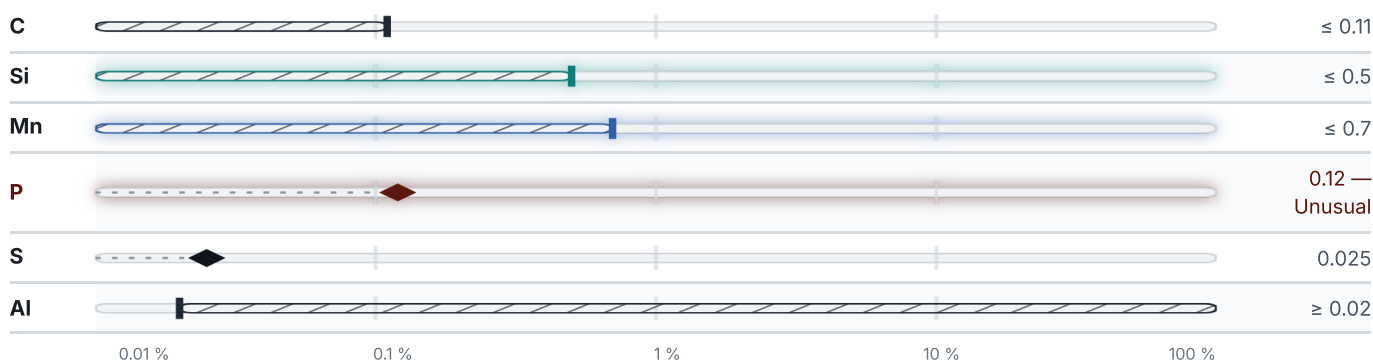
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 98.5 % ● Mn — 0.7 % ● Si — 0.5 % ● P — 0.1 % ● Traces & impurities · 0.2 %

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 1 conditions

NORMALIZING 880 - 900°C, DRAWING 630 - 650°C	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
to 100	412	216	22	35	491

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.85	201	–	54	–	170
100	–	196	12.2	53	487	220
200	–	188	12.7	51	500	294
300	–	183	13.1	48	517	385
400	–	173	13.5	43	533	490
500	–	165	13.9	39	559	604
600	–	152	14.4	35	588	761
700	–	132	14.9	32	638	932
800	–	120	12.6	27	706	1101
900	–	–	12.4	27	706	1139

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	735	°C
Transformation point Ac3	854	°C
Transformation point Ar3	835	°C
Transformation point Ar1	680	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

39 designations · 2 documented as identical

United States		9	Poland		3
1A	aisi-sae		L20		pn
2A	aisi-sae		L450		pn
A10	aisi-sae		LII400		pn
Gr.WCA	aisi-sae		Europe		
GrLCA	aisi-sae				
GrWCB	aisi-sae		H 300 PD	This grade's own name	din-en
J02002	aisi-sae		HX 300 PD	This grade's own name	din-en
J02502	aisi-sae		Italy		
N1	aisi-sae				
France		4	FeG45		uni
230-400-M	afnor		GC20		uni
A48M1	afnor		Czechia		
FA-M	afnor				
FB-M	afnor		422 640		csn
			422 643		csn
Japan		4	Bulgaria		2
SC410	jis		25LI		bds
SC450	jis		25LII		bds
SC46	jis		Sweden		
SCPH1	jis				
Russia / CIS		4	1305		ss
20L	gost		Hungary		
20Л	gost				
25L	gost		Ao450FK		msz
25Л	gost		Romania		
United Kingdom		3	OT450-3		stas
161-430	bs		Austria		
161-430A	bs				
430A	bs		GS45		onorm

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 SC46

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

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ISSUED

Aug 20, 2026