

MATERIAL NUMBER 1.0445 · CLASS 1.0

Gr.F

Material no. 1.0445

also listed as H300BD

Chemical composition, mechanical and physical property values, and 17 standard designations from 12 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 17 in 12 regions	PROPERTY VALUES 8 on file
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Chemical composition

Mass fraction in %

No chemical composition is on file for this material number.

Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: C, Mn, Si, Ni, Cr, Mo.

Mechanical properties

14 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 325 × 30	480	280	28	57	1000
Ø 325 × 30	480	260	27	65	1200
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	KCU kJ/m ²	
Sheet, GOST 5520-79	450–490	275–325	21	590	

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	CP J/(kg·K)
20	7.85	–	–	–
100	–	–	13	470
200	–	–	14	–
300	–	181	15.3	–
400	–	172	16.2	–
500	–	162	16.1	–
600	–	–	16.2	–

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	736	°C
Transformation point Ac3	920	°C
Transformation point Ar3	791	°C
Transformation point Ar1	641	°C

Technological properties

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

Designations across standards

17 designations · 4 documented as identical

United States		4	United Kingdom		1
K03101	This grade's own name	uns	223-490		bs
K03102	This grade's own name	uns			
Gr.F		aisi-sae	France		1
K01803		aisi-sae	A48CP		afnor
Europe		2	International		1
H300BD	This grade's own name	din-en	P11		iso
HX300BD	This grade's own name	din-en			
Russia / CIS		2	Japan		1
16GS		gost	SLA325A		jis
16FC		gost	Italy		1
			Fe460-1KG		uni

Czechia	1	Romania	1
11474	csn	16SiMn4	stas
Poland	1	Bulgaria	1
15GA	pn	16GS	bds

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 Gr.F
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	1.0445	Aug 20, 2026