

MATERIAL NUMBER 1.0308 · CLASS 1.0

PA-ZhGr2

Material no. 1.0308

also listed as E235

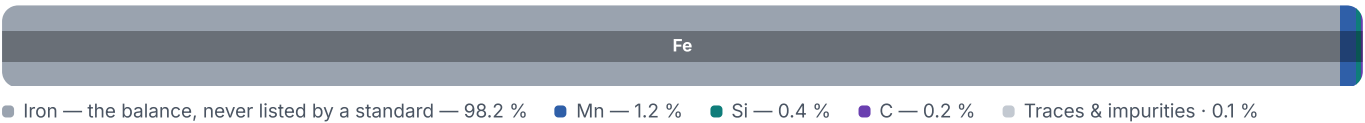
Chemical composition, mechanical and physical property values, and 69 standard designations from 9 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 69 in 9 regions	PROPERTY VALUES 13 on file
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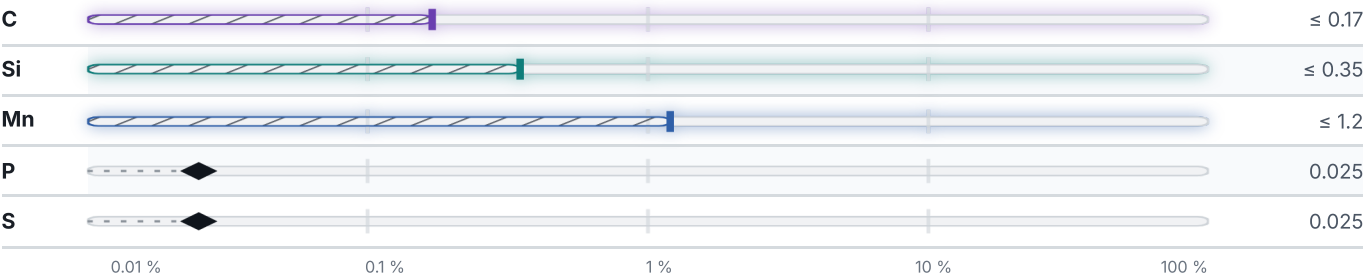
Chemical composition

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

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

Mechanical properties

15 values across 2 conditions

AS ROLLED	REH N/mm ²	RM N/mm ²
≤ 16	235	360

AS ROLLED	REH N/mm²	RM N/mm²	
16 – 40	225	360	
40 – 65	215	360	
65 – 100	–	340	
65 – 80	205	–	
80 – 100	195	–	
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %
to 20	320–410	215	33
20 - 40	320–410	205	32

Physical properties

8 values

CONDITION · DIMENSION			RHO g/cm³
20			7.85
PROPERTY	VALUE	UNIT	
Density	7.85	g/cm³	
Transformation point Ac1	735	°C	
Transformation point Ac3	854	°C	
Transformation point Ar3	835	°C	
Transformation point Ar1	682	°C	

Technological properties

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

Heat treatment

7 regimes

STEP	TEMPERATURE	MEDIUM
Normalizing	Temperature not stated	—
source joins the operations with + / procedural order		
Annealing	Temperature not stated	—

STEP	TEMPERATURE	MEDIUM
Annealing	Temperature not stated	—
Tempering	Temperature not stated	—
Normalizing	Temperature not stated	—
Tempering	Temperature not stated	—
Annealing	Temperature not stated	—
source joins the operations with (or)		
Normalizing	Temperature not stated	—
Normalizing	Temperature not stated	Air
Normalizing	Temperature not stated	—
Normalizing	Temperature not stated	—
Normalizing	Temperature not stated	—
Normalizing	Temperature not stated	—
source joins the operations with (or)		
Annealing	Temperature not stated	—
Tempering	Temperature not stated	—

Designations across standards

69 designations · 7 documented as identical

Russia / CIS		44	United Kingdom		6
08Kh15N5D2T-Sh		gost	CEW4		bs
08X15H5Д2Т		gost	CFS4		bs
08X15H5Д2Т-Ш		gost	ERW2		bs
10		gost	ERW3		bs
10Kh14N5M2L		gost	ERW4		bs
10X14H5M2Л		gost	S360		bs
A2		gost	United States		5
CHKH2		gost	G10100	This grade's own name	uns
CHN2KH		gost	K02504	This grade's own name	uns
KT-2		gost	1010	This grade's own name	aisi-sae
L2		gost	1020		aisi-sae
LR2		gost	A 53 GrA		astm
P2		gost	Europe		4
PA-ZhGr2		gost	E235	This grade's own name	din-en
PA-ZhGr2D		gost	RSt 37-2	This grade's own name	din-en
PA-ZhGr2K		gost	S235G2T	This grade's own name	din-en
PF2		gost	St 35	This grade's own name	din-en
PL2		gost	China		4
PVK2		gost	Q215B		gb
PZhR2		gost	Q215B-b		gb
PZhV2		gost	Q215B-F		gb
St2kp		gost	Q215B-Z		gb
V2F		gost	France		3
VSt2kp		gost	ES235		afnor
VSt2ps		gost	TS-34a		afnor
VSt2sp		gost	TU376		afnor
ACHK-2		gost	Italy		1
ACHS-2		gost	Fe360		uni
ACHV-2		gost	Czechia		1
ВНЛ-2		gost	11353		csn
ВНС-2-Ш		gost	Croatia		1
Ж50-58		gost	Č0361		hrn
ЖГр2		gost			
ЖГр2-20		gost			
ЖГр2Д2.5		gost			
ЖГр2К1		gost			
ЖГр3Д3		gost			
ЖГр3Д3-5.5		gost			
ЖГр3К0.8		gost			
ЖГр3К1		gost			
Ст2пс		gost			
Ст2сп		gost			
ЭП410		gost			
ЭП410-Ш		gost			

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 PA-ZhGr2
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