

MATERIAL NUMBER 1.0334 · CLASS 1.0

UStW 23

Material no. 1.0334

also listed as DD 12 G 1

Chemical composition, mechanical and physical property values, and 29 standard designations from 11 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 29 in 11 regions	PROPERTY VALUES 14 on file
--	---	--------------------------------------

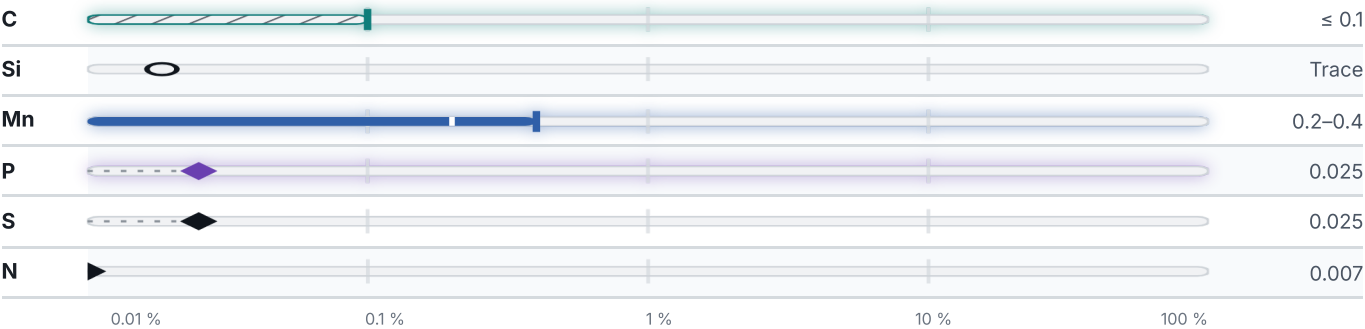
Chemical composition

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: Si, Ni, Cr, Mo.

Mechanical properties

15 values across 3 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	HB
Pipe, GOST 10705-80	314	196	25	–	–
Steel cold-drawn , GOST 10702-78	372	–	8	55	–
(cold-drawn, cold-worked) , GOST 10702-78	–	–	–	–	179
Sheet GOST 4041-71	–	–	–	–	114
(annealing) , Sheet trick GOST 1577-93	–	–	–	–	137
CONDITION · DIMENSION	RM N/mm ²			A5 %	
4 - 14	270–410			32	
NORMALIZING	RM N/mm ²	RE N/mm ²	A5 %	Z %	
6 - 60	310	185	33	55	

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	7.856	186	–	–	–	–
100	7.832	–	12.4	58	466	190
200	7.8	–	13.2	54	479	263
300	7.765	–	13.9	49	–	352
400	7.73	–	14.5	45	512	458
500	7.692	–	14.9	40	–	584
600	7.653	–	15.1	36	567	734
700	7.613	–	15.3	32	–	905
800	7.582	–	12.1	29	–	1081
900	7.594	–	14.8	27	–	1130
1000	–	–	12.6	–	–	–
PROPERTY	VALUE		UNIT			
Density	7.85		g/cm ³			
Transformation point Ac1	732		°C			
Transformation point Ac3	870		°C			

PROPERTY	VALUE	UNIT
Transformation point Ar3	854	°C
Transformation point Ar1	680	°C

Technological properties

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

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
Normalizing	Temperature not stated	—

Designations across standards

29 designations · 2 documented as identical

Japan		6	Europe		2
SPH2A	jis		DD 12 G 1	This grade's own name	din-en
SPHD	jis		UStW 23	This grade's own name	din-en
SPHE	jis		China		2
SWRCH10K	jis		10F		gb
SWRCH10R	jis		ML10		gb
SWRCH12R	jis		Russia / CIS		2
United States		5	10kp		gost
1008	aisi-sae		10kn		gost
1010	aisi-sae		Spain		1
1012	aisi-sae		AP12		une
A621	aisi-sae		International		1
1010	astm		C10GC		iso
France		5	Italy		1
1C	afnor		FeP12		uni
2C	afnor		Czechia		1
FB10	afnor		12010		csn
FR10	afnor				
XC10	afnor				
United Kingdom		3			
O40A10	bs				
14HR	bs				
3HR	bs				

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 UStW 23

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.
1.0334

ISSUED
Aug 20, 2026