

MATERIAL NUMBER 1.7176 · CLASS 1.7

55C3

Material no. 1.7176

also listed as 55Cr3

Chemical composition, mechanical and physical property values, and 47 standard designations from 18 regions.

DENSITY 7.45 g/cm ³	OTHER DESIGNATIONS 47 in 18 regions	PROPERTY VALUES 12 on file
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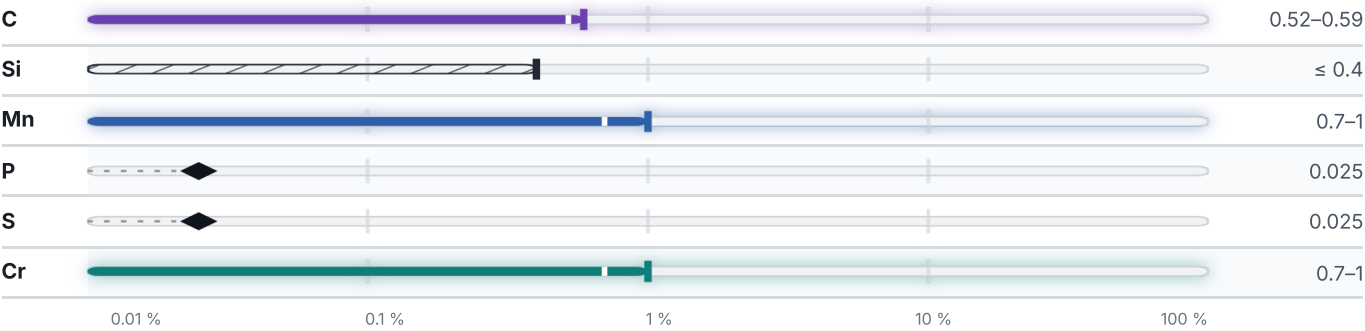
Chemical composition

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, Mo.

Mechanical properties

9 values across 5 conditions

CONDITION · DIMENSION	HB			
(annealing) , GOST 14959-79	269			
(without heat treatment) , GOST 14959	302			
TREATED TO IMPROVE SHEARABILITY	HB			
Treated to improve shearability	280			
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %
Rolled stock, GOST 14959-79	1270	1175	7	35
SOFT ANNEALED	HB			
Soft annealed	248			
ANNEALED TO ACHIEVE SPHEROIDIZATION OF THE CARBIDES	HB			
Annealed to achieve spheroidization of the carbides	230			

Physical properties

6 values

PROPERTY	VALUE	UNIT
Density	7.45	g/cm ³
Transformation point Ac1	750	°C
Transformation point Ac3	775	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	is not used.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

47 designations · 8 documented as identical

United States		14	Japan		2
G51500		uns	SUP9		jis
G51600	This grade's own name	uns	SUP9A		jis
H51550	This grade's own name	uns			
H51600	This grade's own name	uns	China		2
5147		aisi-sae	20CrMn		gb
5147H		aisi-sae	55CrMnA		gb
5150		aisi-sae			
5150H		aisi-sae	Czechia		2
5155	This grade's own name	aisi-sae	14160		csn
5155H	This grade's own name	aisi-sae	14262		csn
5160	This grade's own name	aisi-sae			
5160H	This grade's own name	aisi-sae	Australia / New Zealand		2
G51470		aisi-sae	5155		as-nzs
G51500		aisi-sae	XK5155S		as-nzs
United Kingdom		6	Bulgaria		2
525A		bs	50ChG		bds
525A58		bs	50ChGA		bds
525A61		bs			
525H60		bs	South Korea		2
527A60		bs	SPS5		ks
EN 48		bs	SPS5A		ks
Russia / CIS		3	Italy		1
50KHG		gost	55Cr3		uni
50KHGA		gost			
50XF		gost	Sweden		1
			2253		ss
Europe		2	Poland		1
1.7176		din-en	50HG		pn
55Cr3	This grade's own name	din-en			
France		2	Latin America		1
45C4		afnor	5160		copant
55C3		afnor			
Spain		2	Serbia		1
55Cr3		une	Č.4332		srps
F.1431		une	Belgium		1
			55Cr3		nbn

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 55C3

Quotation, availability, mill certificate or a technical question — directly on the material page.

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DATASHEET ONLINE

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ISSUED

Aug 20, 2026