

MATERIAL NUMBER 1.7176 · CLASS 1.7

# 55Cr3

## Material no. 1.7176

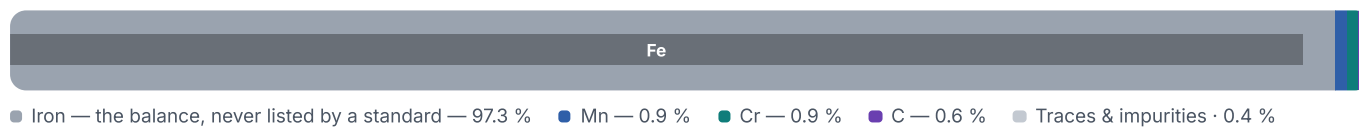
Chemical composition, mechanical and physical property values, and 47 standard designations from 18 regions.

| DENSITY                       | OTHER DESIGNATIONS      | PROPERTY VALUES   |
|-------------------------------|-------------------------|-------------------|
| <b>7.45</b> g/cm <sup>3</sup> | <b>47</b> in 18 regions | <b>12</b> on file |

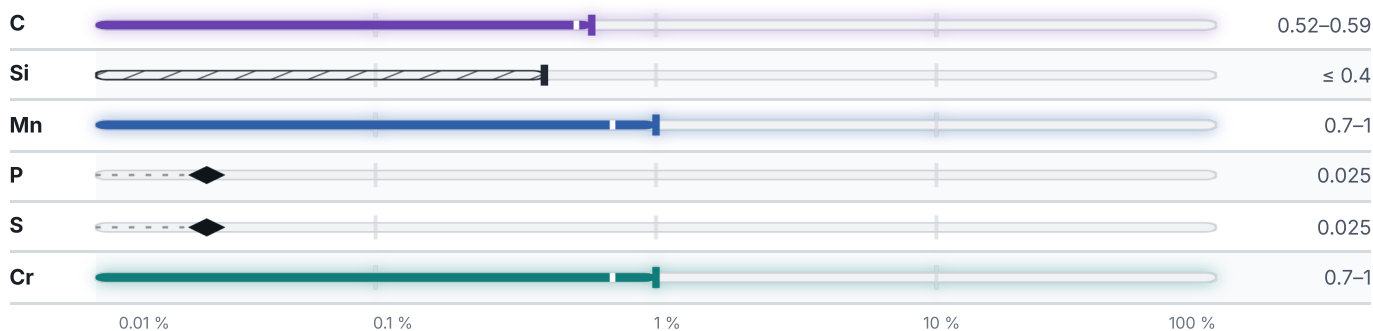
### Chemical composition

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: 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<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% |
| Rolled stock, GOST 14959-79                            | 1270                    | 1175                    | 7       | 35     |
| SOFT ANNEALED                                          | HB                      |                         |         |        |
| Soft annealed                                          | 248                     |                         |         |        |
| ANNEALED TO ACHIEVE<br>SPHEROIDIZATION OF THE CARBIDES | HB                      |                         |         |        |
| Annealed to achieve spheroidization<br>of the carbides | 230                     |                         |         |        |

## Physical properties

6 values

| PROPERTY                 | VALUE | UNIT              |
|--------------------------|-------|-------------------|
| Density                  | 7.45  | g/cm <sup>3</sup> |
| 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

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

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

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ISSUED

Aug 20, 2026