

MATERIAL NUMBER 1.5021 · CLASS 1.5

# 46SiCr7

Material no. 1.5021

also listed as 48Si7

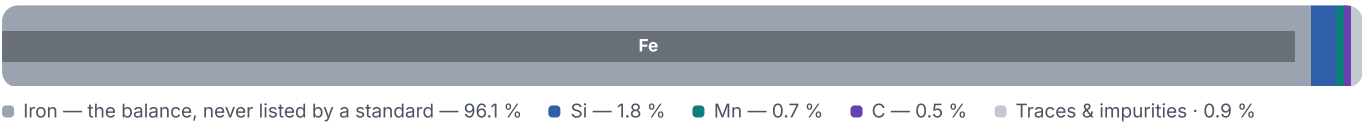
Chemical composition, mechanical and physical property values, and 7 standard designations from 4 regions.

|                              |                                             |                                     |
|------------------------------|---------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm³ | OTHER DESIGNATIONS<br><b>7</b> in 4 regions | PROPERTY VALUES<br><b>9</b> on file |
|------------------------------|---------------------------------------------|-------------------------------------|

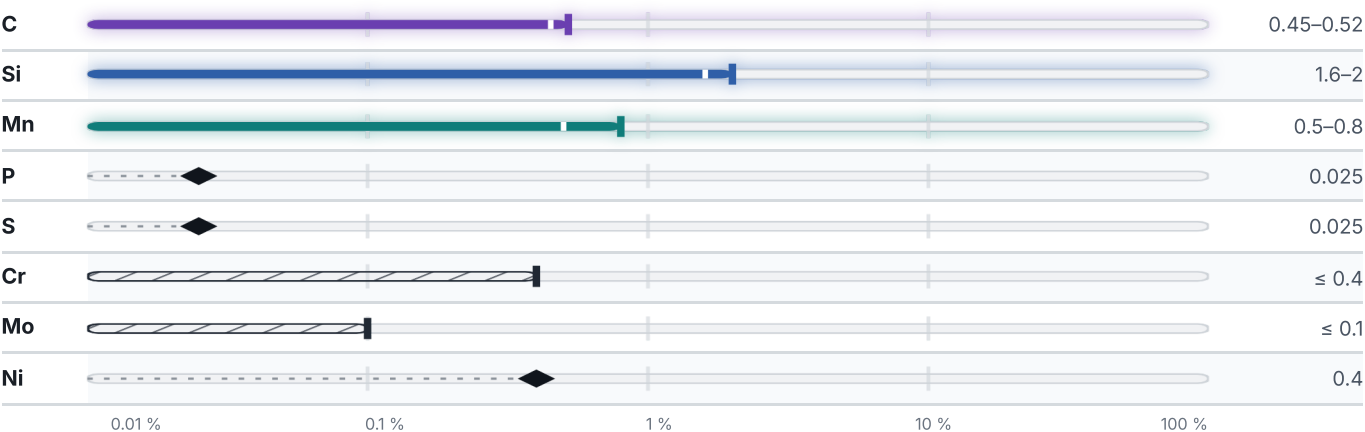
## Chemical composition

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

computed from composition · °C

|                                |                                |                                |                               |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| PREDICTED AE3<br><b>831</b> °C | PREDICTED AE1<br><b>760</b> °C | PREDICTED ACM<br><b>674</b> °C | PREDICTED BS<br><b>555</b> °C |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|

Mechanical properties

5 values across 4 conditions

|                       |                         |           |
|-----------------------|-------------------------|-----------|
| SOFT ANNEALED         | RM<br>N/mm <sup>2</sup> | A80<br>%  |
| 0.3 – 3               | 720                     | 13        |
| QUENCHED AND TEMPERED | RM<br>N/mm <sup>2</sup> |           |
| 0.3 – 3               |                         | 1200–1700 |
| SOFT ANNEALED         |                         | HV        |
| Soft annealed         |                         | 225       |
| QUENCHED AND TEMPERED |                         | HV        |
| Quenched and tempered |                         | 370–520   |

Physical properties

1 values

|          |       |                   |
|----------|-------|-------------------|
| PROPERTY | VALUE | UNIT              |
| Density  | 7.85  | g/cm <sup>3</sup> |

Designations across standards

7 designations · 1 documented as identical

|              |      |         |                                 |
|--------------|------|---------|---------------------------------|
| Poland       | 3    | Europe  | 1                               |
| 40S2         | pn   | 48Si7   | This grade's own name<br>din-en |
| 50S2         | pn   |         |                                 |
| 55S2         | pn   | France  | 1                               |
|              |      | 46SiCr7 | afnor                           |
| Russia / CIS | 2    |         |                                 |
| 40C2         | gost |         |                                 |
| 55C2         | 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 46SiCr7

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 | 1.5021       | Aug 20, 2026 |