

MATERIAL NUMBER 1.1525 · CLASS 1.1

# C80U

## Material no. 1.1525

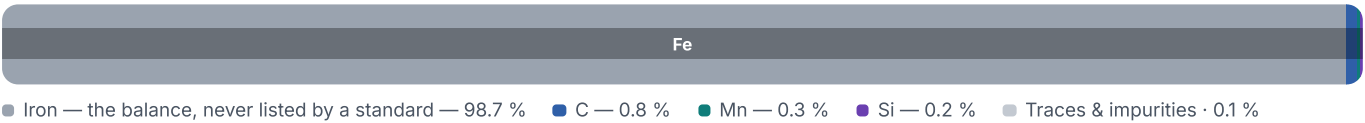
Chemical composition, mechanical and physical property values, and 44 standard designations from 19 regions.

|                                          |                                               |                                      |
|------------------------------------------|-----------------------------------------------|--------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>44</b> in 19 regions | PROPERTY VALUES<br><b>11</b> on file |
|------------------------------------------|-----------------------------------------------|--------------------------------------|

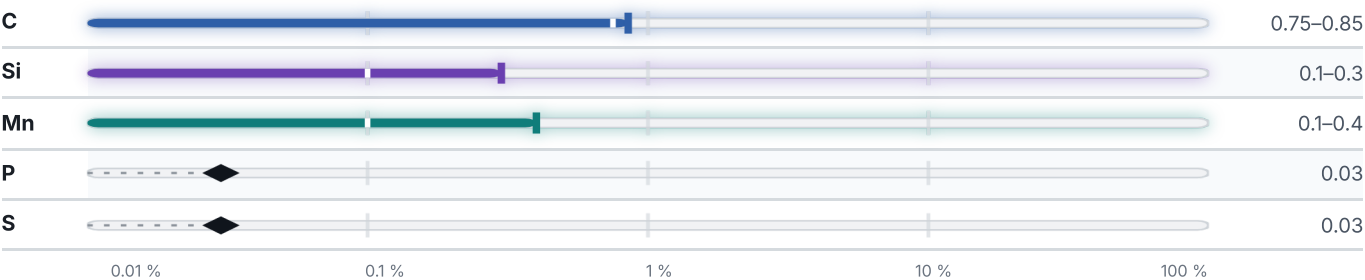
### Chemical composition

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, Cr, Mo.

### Mechanical properties

10 values across 5 conditions

| CONDITION · DIMENSION | HB  | HRC |
|-----------------------|-----|-----|
| ( SK5 ) Annealed      | 207 | –   |

| CONDITION · DIMENSION               |                         | HB                      |         |        | HRC |
|-------------------------------------|-------------------------|-------------------------|---------|--------|-----|
| ( SK5 ) Quenched and tempered       |                         | —                       |         |        | 59  |
| SOFT ANNEALED                       |                         |                         |         |        | HB  |
| Soft annealed                       |                         |                         |         |        | 192 |
| QUENCHING 780°C, OIL, DRAWING 400°C | RM<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% |     |
| 6                                   | 1420                    | 1230                    | 10      | 37     |     |
| CONDITION · DIMENSION               |                         | RM<br>N/mm <sup>2</sup> | A5<br>% |        |     |
| 1.5                                 |                         | 750                     | 10      |        |     |
| CONDITION · DIMENSION               |                         |                         |         | HB     |     |
| (annealing) , GOST 1435-99          |                         |                         |         | 187    |     |

## Physical properties

6 values

| CONDITION · DIMENSION    | RHO<br>g/cm <sup>3</sup> | E<br>GPa | ALPHA<br>10 <sup>-6</sup> /K | LAMBDA<br>W/(m·K) | CP<br>J/(kg·K) | RHO_EL<br>nΩ·m |
|--------------------------|--------------------------|----------|------------------------------|-------------------|----------------|----------------|
| 20                       | 7.839                    | 209      | –                            | –                 | –              | –              |
| 100                      | 7.817                    | 205      | 11.4                         | 49                | 477            | 230            |
| 200                      | 7.786                    | 199      | 12.2                         | 46                | 511            | 305            |
| 300                      | 7.752                    | 192      | 13                           | 42                | 528            | 395            |
| 400                      | 7.714                    | 185      | 13.7                         | 38                | 548            | 491            |
| 500                      | 7.676                    | 175      | 14.3                         | 35                | 565            | 625            |
| 600                      | 7.638                    | 166      | 14.8                         | 33                | 594            | 769            |
| 700                      | 7.6                      | –        | 15.2                         | 30                | 624            | 931            |
| 800                      | 7.852                    | –        | 14.5                         | 24                | 724            | 1129           |
| 900                      | –                        | –        | –                            | –                 | –              | 1165           |
| PROPERTY                 | VALUE                    |          | UNIT                         |                   |                |                |
| Density                  | 7.85                     |          | g/cm <sup>3</sup>            |                   |                |                |
| Transformation point Ac1 | 720                      |          | °C                           |                   |                |                |
| Transformation point Ar1 | 700                      |          | °C                           |                   |                |                |

## Technological properties

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

## Designations across standards

44 designations · 4 documented as identical

|                                              |          |                       |      |
|----------------------------------------------|----------|-----------------------|------|
| <b>United States</b>                         | 8        | <b>International</b>  | 2    |
| T72301                                       | uns      | C80U                  | iso  |
| W1                                           | aisi-sae | TC80                  | iso  |
| W1-7                                         | aisi-sae |                       |      |
| W1-8                                         | aisi-sae | <b>Italy</b>          | 2    |
| W108 <span>This grade's own name</span>      | aisi-sae | C80KU                 | uni  |
| W108Extra                                    | aisi-sae | C90KU                 | uni  |
| W1C 0,80% <span>This grade's own name</span> | aisi-sae |                       |      |
| W1A-8                                        | astm     | <b>Hungary</b>        | 2    |
|                                              |          | S91                   | msz  |
| <b>Russia / CIS</b>                          | 6        | S92                   | msz  |
| U8                                           | gost     |                       |      |
| U8A                                          | gost     | <b>South Korea</b>    | 2    |
| U8G                                          | gost     | STC5                  | ks   |
| U9                                           | gost     | STC6                  | ks   |
| Y8Г                                          | gost     |                       |      |
| Y9                                           | gost     | <b>United Kingdom</b> | 1    |
|                                              |          | BW1A                  | bs   |
| <b>Japan</b>                                 | 4        |                       |      |
| SK5                                          | jis      | <b>Spain</b>          | 1    |
| SK6                                          | jis      | F-513                 | une  |
| SK75                                         | jis      |                       |      |
| SK85                                         | jis      | <b>China</b>          | 1    |
|                                              |          | T8                    | gb   |
| <b>Europe</b>                                | 3        |                       |      |
| C80U <span>This grade's own name</span>      | din-en   | <b>Czechia</b>        | 1    |
| C80W1 <span>This grade's own name</span>     | din-en   | 19152                 | csn  |
| C80W2                                        | din-en   |                       |      |
|                                              |          | <b>Slovakia</b>       | 1    |
| <b>France</b>                                | 3        | 19 152                | stn  |
| C90E2U                                       | afnor    |                       |      |
| Y1-90                                        | afnor    | <b>Serbia</b>         | 1    |
| Y180                                         | afnor    | Č.1840                | srps |
|                                              |          |                       |      |
| <b>Poland</b>                                | 3        | <b>Romania</b>        | 1    |
| N8                                           | pn       | OSC8                  | stas |
| N8E                                          | pn       |                       |      |
| N9                                           | pn       | <b>Bulgaria</b>       | 1    |
|                                              |          | U9                    | bds  |

|         |       |
|---------|-------|
| Austria | 1     |
| K980    | onorm |

**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 C80U

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

[Start an enquiry](#)

| DATASHEET ONLINE                       | GRADE SEARCH                      | MATERIAL NO. | ISSUED       |
|----------------------------------------|-----------------------------------|--------------|--------------|
| <a href="#">View the material page</a> | <a href="#">Search all grades</a> | 1.1525       | Aug 20, 2026 |