

MATERIAL NUMBER 1.0402 · CLASS 1.0

# 2C22

## Material no. 1.0402

also listed as C22

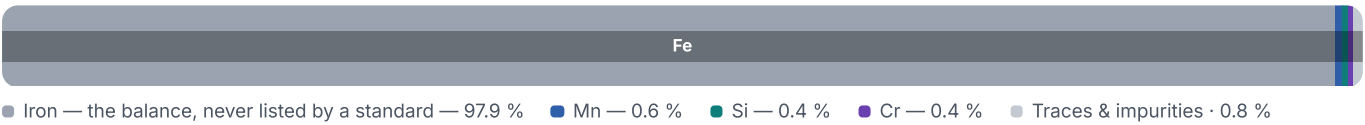
Chemical composition, mechanical and physical property values, and 94 standard designations from 24 regions.

|                                          |                                               |                                     |
|------------------------------------------|-----------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>94</b> in 24 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>812</b> °C | PREDICTED AE1<br><b>725</b> °C | PREDICTED ACM<br><b>465</b> °C | PREDICTED BS<br><b>575</b> °C |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|

## Mechanical properties

2 values across 1 conditions

| NORMALIZED | RM<br>N/mm <sup>2</sup> | A<br>% |
|------------|-------------------------|--------|
| ≤ 100      | 410                     | 25     |

## Physical properties

1 values

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

## Designations across standards

94 designations · 7 documented as identical

|                |                       |          |           |       |    |
|----------------|-----------------------|----------|-----------|-------|----|
| United Kingdom |                       | 14       | France    |       | 12 |
| 050A20         | bs                    |          | 1C22      | afnor |    |
| 055M15         | bs                    |          | 2C22      | afnor |    |
| 055M15-EN2C    | bs                    |          | AF42      | afnor |    |
| 070M20         | bs                    |          | AF42C20   | afnor |    |
| 070M26         | bs                    |          | C20       | afnor |    |
| 1449-22CS      | bs                    |          | C22       | afnor |    |
| 1449-22HS      | bs                    |          | C22E      | afnor |    |
| 1C22           | bs                    |          | C25E      | afnor |    |
| 22HS           | bs                    |          | CC20      | afnor |    |
| 2C             | bs                    |          | XC15      | afnor |    |
| 430            | bs                    |          | XC18      | afnor |    |
| C22            | bs                    |          | XC25      | afnor |    |
| C22E           | bs                    |          |           |       |    |
| EN2C           | bs                    |          | Japan     |       | 8  |
| United States  |                       | 13       | S20C      | jis   |    |
| G10200         | This grade's own name | uns      | S20CK     | jis   |    |
| G10220         | This grade's own name | uns      | S22C      | jis   |    |
| G10230         | This grade's own name | uns      | STB410    | jis   |    |
| 1020           | This grade's own name | aisi-sae | STKM12A   | jis   |    |
| 1022           | This grade's own name | aisi-sae | STKM12A-S | jis   |    |
| 1023           | This grade's own name | aisi-sae | STKM13B   | jis   |    |
| 1024           |                       | aisi-sae | STKM13B-W | jis   |    |
| G10200         |                       | aisi-sae | Italy     |       | 8  |
| G10230         |                       | aisi-sae | C18       | uni   |    |
| H10200         |                       | aisi-sae | C20       | uni   |    |
| M1020          |                       | aisi-sae | C21       | uni   |    |
| M1023          |                       | aisi-sae | C22       | uni   |    |
| SAE1020        |                       | aisi-sae | C22E      | uni   |    |
|                |                       |          | C22R      | uni   |    |
|                |                       |          | C25       | uni   |    |
|                |                       |          | C25E      | uni   |    |

|                                        |        |                      |        |
|----------------------------------------|--------|----------------------|--------|
| <b>Spain</b>                           | 5      | <b>Poland</b>        | 2      |
| 1C22                                   | une    | 20                   | pn     |
| C22                                    | une    | K18                  | pn     |
| C25k                                   | une    |                      |        |
| F.112                                  | une    | <b>Hungary</b>       | 2      |
| F.1120                                 | une    | A45.47               | msz    |
|                                        |        | C22E                 | msz    |
| <b>China</b>                           | 4      |                      |        |
| 20                                     | gb     | <b>Romania</b>       | 2      |
| 20G                                    | gb     | OLC20                | stas   |
| 20R                                    | gb     | OLC20X               | stas   |
| 20Z                                    | gb     |                      |        |
| <b>Australia / New Zealand</b>         | 3      | <b>Belgium</b>       | 2      |
| 1020                                   | as-nzs | C25-1                | nbn    |
| K1018                                  | as-nzs | C25-2                | nbn    |
| M1020                                  | as-nzs |                      |        |
| <b>Bulgaria</b>                        | 3      | <b>International</b> | 1      |
| 20                                     | bds    | C25                  | iso    |
| C22                                    | bds    |                      |        |
| C22E                                   | bds    | <b>Sweden</b>        | 1      |
|                                        |        | 1450                 | ss     |
| <b>South Korea</b>                     | 3      | <b>Latin America</b> | 1      |
| SM20C                                  | ks     | 1020                 | copant |
| SM20CK                                 | ks     |                      |        |
| SM22C                                  | ks     | <b>Slovakia</b>      | 1      |
|                                        |        | 12 024               | stn    |
| <b>Europe</b>                          | 2      | <b>Serbia</b>        | 1      |
| 1.0402                                 | din-en | Č.1330               | srps   |
| C22 <span>This grade's own name</span> | din-en |                      |        |
| <b>Russia / CIS</b>                    | 2      | <b>Croatia</b>       | 1      |
| 20                                     | gost   | Č.1330               | hrn    |
| st 20                                  | gost   |                      |        |
| <b>Czechia</b>                         | 2      | <b>Switzerland</b>   | 1      |
| 12022                                  | csn    | Ck22                 | snv    |
| 12024                                  | csn    |                      |        |

**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 2C22

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ISSUED

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