

MATERIAL NUMBER 1.1186 · CLASS 1.1

# Ç 1040

Material no. 1.1186

also listed as C40E

Chemical composition, mechanical and physical property values, and 25 standard designations from 16 regions.

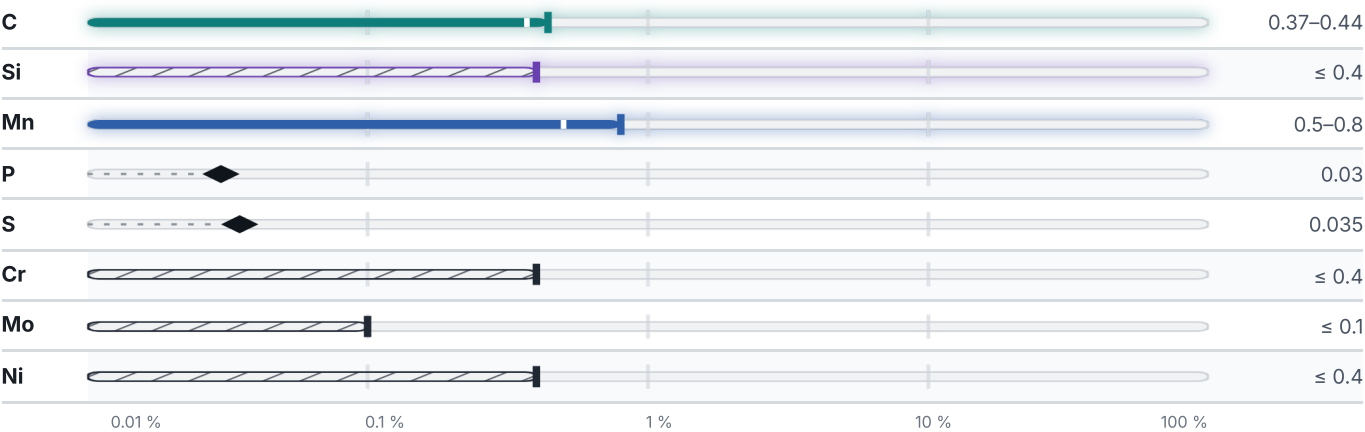
|                              |                                               |                                     |
|------------------------------|-----------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm³ | OTHER DESIGNATIONS<br><b>25</b> in 16 regions | PROPERTY VALUES<br><b>9</b> on file |
|------------------------------|-----------------------------------------------|-------------------------------------|

Chemical composition

Mass fraction in %



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>774</b> °C | PREDICTED AE1<br><b>724</b> °C | PREDICTED ACM<br><b>603</b> °C | PREDICTED BS<br><b>560</b> °C |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|

## Mechanical properties

22 values across 7 conditions

| COLD DRAWN / HARD    | RM<br>N/mm <sup>2</sup> | A<br>%   |
|----------------------|-------------------------|----------|
| 5 – 10               | 700–1000                | 6        |
| 10 – 16              | 650–980                 | 7        |
| 16 – 40              | 620–920                 | 8        |
| 40 – 63              | 590–840                 | 9        |
| 63 – 100             | 550–820                 | 9        |
| NORMALIZED           | RM<br>N/mm <sup>2</sup> | A<br>%   |
| ≤ 16                 | 580                     | 16       |
| 16 – 100             | 550                     | 17       |
| 100 – 250            | 530                     | 17       |
| SOFT ANNEALED        | RM<br>N/mm <sup>2</sup> | A80<br>% |
| 0.3 – 3              | 550                     | 18       |
| COLD ROLLED          | RM<br>N/mm <sup>2</sup> |          |
| 0.3 – 3              |                         | 970      |
| AS ROLLED AND TURNED |                         | HB       |
| As rolled and turned |                         | 163–211  |
| COLD ROLLED          |                         | HV       |
| Cold rolled          |                         | 280      |
| SOFT ANNEALED        |                         | HV       |
| Soft annealed        |                         | 170      |

## Physical properties

1 values

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

Designations across standards

25 designations · 4 documented as identical

|                              |          |                         |        |
|------------------------------|----------|-------------------------|--------|
| United Kingdom               | 4        | International           | 1      |
| 060A40                       | bs       | C40E4                   | iso    |
| 080A40                       | bs       |                         |        |
| 080M40                       | bs       | Japan                   | 1      |
| CS40                         | bs       | S 40C                   | jis    |
| France                       | 4        | Italy                   | 1      |
| C40E                         | afnor    | C40                     | uni    |
| XC 42                        | afnor    |                         |        |
| XC38H1                       | afnor    | Czechia                 | 1      |
| XC42H1                       | afnor    | 12041                   | csn    |
| Europe                       | 2        | Latin America           | 1      |
| C40E This grade's own name   | din-en   | 1040                    | copant |
| Ck 40 This grade's own name  | din-en   |                         |        |
| United States                | 2        | Slovakia                | 1      |
| G10400 This grade's own name | uns      | 12 041                  | stn    |
| 1040 This grade's own name   | aisi-sae | Poland                  | 1      |
|                              |          | 40                      | pn     |
| Russia / CIS                 | 2        | Türkiye                 | 1      |
| 40                           | gost     | Ç 1040                  | mke    |
| CT.40                        | gost     |                         |        |
| Spain                        | 1        | Hungary                 | 1      |
| C35k                         | une      | C 40                    | msz    |
|                              |          | Australia / New Zealand | 1      |
|                              |          | 1040                    | as-nzs |

**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 Ç 1040

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

Start an enquiry

|                        |                   |              |              |
|------------------------|-------------------|--------------|--------------|
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