

MATERIAL NUMBER 1.8912 · CLASS 1.8

# Q420E

Material no. 1.8912

also listed as S420NL

Chemical composition, mechanical and physical property values, and 14 standard designations from 5 regions.

## DENSITY

**7.85** g/cm<sup>3</sup>

## OTHER DESIGNATIONS

**14** in 5 regions

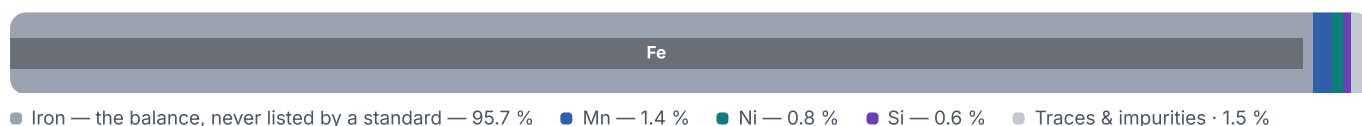
## PROPERTY VALUES

**15** on file

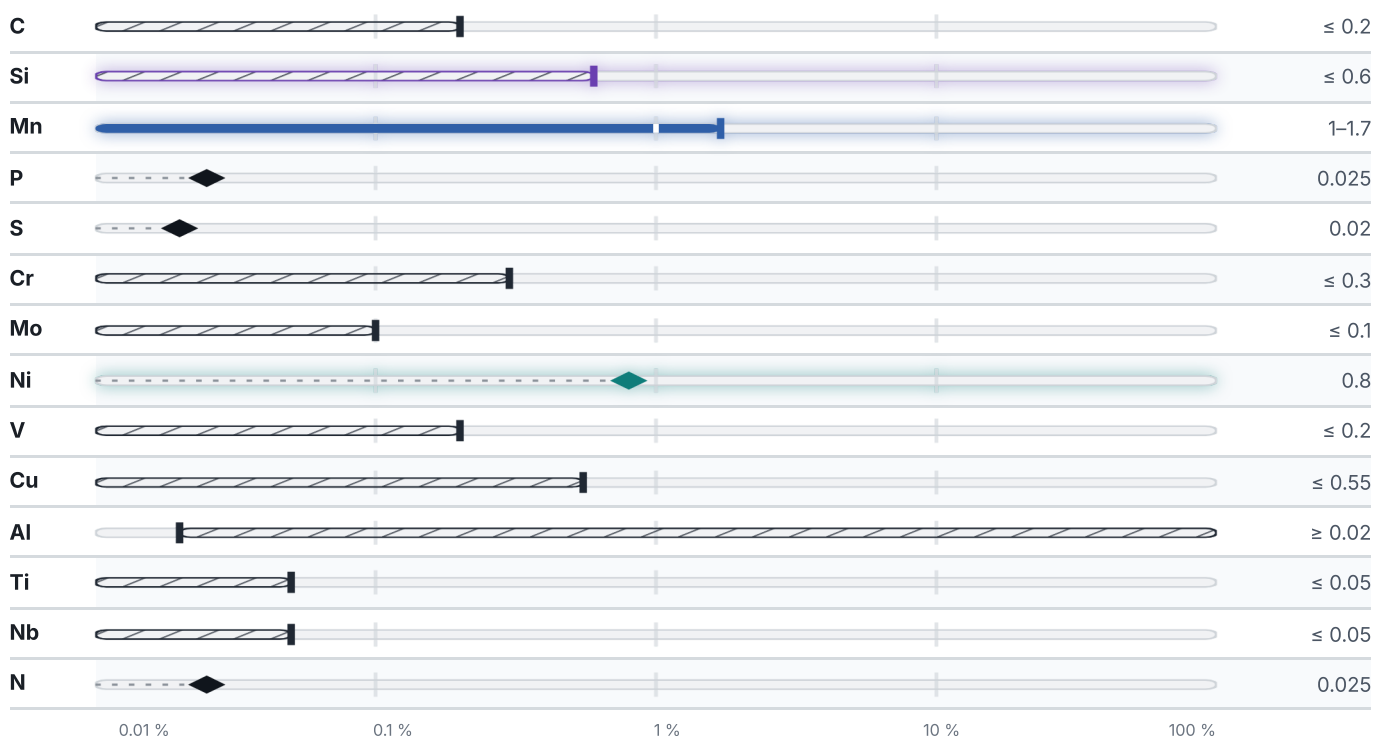
## Chemical composition

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>807 °C | PREDICTED AE1<br>708 °C | PREDICTED ACM<br>438 °C | PREDICTED BS<br>540 °C |
|-------------------------|-------------------------|-------------------------|------------------------|

Mechanical properties

17 values across 1 conditions

| CONDITION · DIMENSION | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> | A<br>% |
|-----------------------|--------------------------|-------------------------|--------|
| ≤ 16                  | 420                      | –                       | 19     |
| 16 – 40               | 400                      | –                       | 19     |
| 40 – 63               | 390                      | –                       | 19     |
| 63 – 80               | 370                      | –                       | 18     |
| 80 – 100              | 360                      | –                       | –      |
| 80 – 200              | –                        | –                       | 18     |
| ≤ 100                 | –                        | 520–680                 | –      |
| 100 – 200             | –                        | 500–650                 | –      |
| 100 – 150             | 340                      | –                       | –      |
| 150 – 200             | 330                      | –                       | –      |
| 200 – 250             | 320                      | 500–650                 | 18     |

Physical properties

1 values

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

Designations across standards

14 designations · 2 documented as identical

|                |          |                 |                                 |
|----------------|----------|-----------------|---------------------------------|
| United States7 |          | Europe4         |                                 |
| K02002         | uns      | A738Gr.C        | din-en                          |
| K12202         | uns      | FeE420KTN       | din-en                          |
| K12437         | uns      | S420NL          | This grade's own name<br>din-en |
| A572Gr.60      | aisi-sae | TStE 420        | This grade's own name<br>din-en |
| A633E          | aisi-sae |                 |                                 |
| A633Gr.E       | aisi-sae | United Kingdom1 |                                 |
| A738Gr.C       | aisi-sae | 50F             | bs                              |
|                |          | France1         |                                 |
|                |          | E420FP          | afnor                           |

|       |    |
|-------|----|
| China | 1  |
| Q420E | gb |

**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 Q420E

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> | 1.8912       | Aug 20, 2026 |