

MATERIAL NUMBER 1.0143 · CLASS 1.0

# AE255C

## Material no. 1.0143

also listed as S275J0

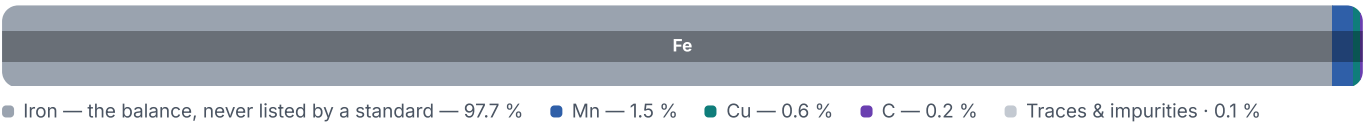
Chemical composition, mechanical and physical property values, and 25 standard designations from 16 regions.

|                                          |                                               |                                     |
|------------------------------------------|-----------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>25</b> in 16 regions | PROPERTY VALUES<br><b>8</b> on file |
|------------------------------------------|-----------------------------------------------|-------------------------------------|

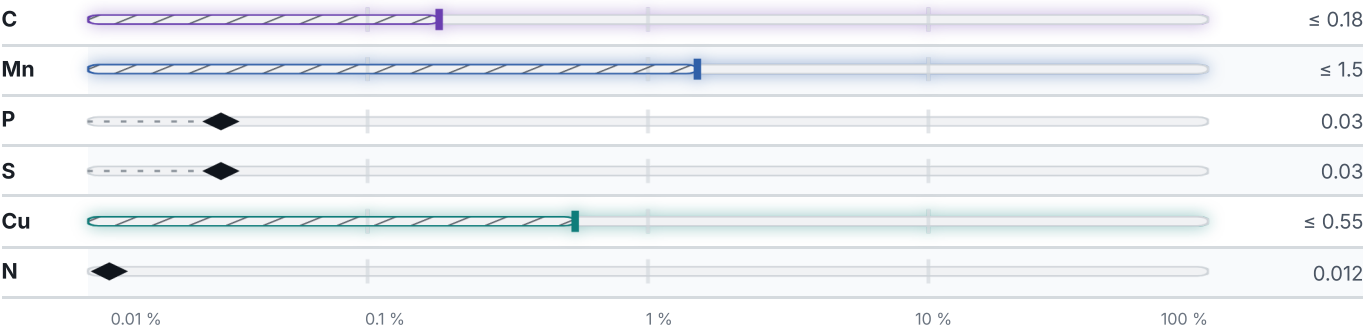
Chemical composition

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: Si, Ni, Cr, Mo.

## Mechanical properties

31 values across 3 conditions

| FLAT AND LONG PRODUCTS      | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> |         |
|-----------------------------|--------------------------|-------------------------|---------|
| ≤ 3                         | –                        | 430–580                 |         |
| 3 – 100                     | –                        | 410–560                 |         |
| ≤ 16                        | 275                      | –                       |         |
| 16 – 40                     | 265                      | –                       |         |
| 40 – 63                     | 255                      | –                       |         |
| 63 – 80                     | 245                      | –                       |         |
| 80 – 100                    | 235                      | –                       |         |
| 100 – 150                   | 225                      | 400–540                 |         |
| 150 – 250                   | –                        | 380–540                 |         |
| 150 – 200                   | 215                      | –                       |         |
| 200 – 250                   | 205                      | –                       |         |
|                             |                          |                         |         |
| CONDITION · DIMENSION       | A80<br>% · Lo = 80 mm    | A<br>% · Lo = 5,65 √So  |         |
| ≤ 1                         | 15                       | –                       |         |
| 1 – 1.5                     | 16                       | –                       |         |
| 1.5 – 2                     | 17                       | –                       |         |
| 2 – 2.5                     | 18                       | –                       |         |
| 2.5 – 3                     | 19                       | –                       |         |
| 3 – 40                      | –                        | 23                      |         |
| 40 – 63                     | –                        | 22                      |         |
| 63 – 100                    | –                        | 21                      |         |
| 100 – 150                   | –                        | 19                      |         |
| 150 – 250                   | –                        | 18                      |         |
|                             |                          |                         |         |
| CONDITION · DIMENSION       | RM<br>N/mm <sup>2</sup>  | RE<br>N/mm <sup>2</sup> | A5<br>% |
| Pipe, GOST 10705-80         | 412                      | 245                     | 21      |
| Rolled stock, GOST 535-2005 | 410–530                  | 235–265                 | 21–24   |
| Sheet trick, GOST 14637-89  | 410–530                  | 235–265                 | 21–23   |

Physical properties

2 values

| CONDITION · DIMENSION |  | RHO<br>g/cm³ |  |
|-----------------------|--|--------------|--|
| 20                    |  | 7.85         |  |

| PROPERTY | VALUE | UNIT  |  |
|----------|-------|-------|--|
| Density  | 7.85  | g/cm³ |  |

Technological properties

| PROPERTY    | VALUE                | UNIT |
|-------------|----------------------|------|
| Weldability | limited weldability. |      |

Designations across standards

25 designations · 3 documented as identical

|                |                       |        |               |  |       |
|----------------|-----------------------|--------|---------------|--|-------|
| Europe         |                       | 5      | France        |  | 1     |
| Fe430C         | din-en                |        | E28-3         |  | afnor |
| P265GH         | din-en                |        | International |  |       |
| S275J0         | This grade's own name | din-en | 1             |  |       |
| St 44-3 U      | This grade's own name | din-en | E275C         |  | iso   |
| St44-3         | din-en                |        | Norway        |  |       |
| United States  |                       | 2      | 1             |  |       |
| K02702         | This grade's own name | uns    | NS12143       |  | ns    |
| A578Gr.70      | aisi-sae              |        | Portugal      |  |       |
| United Kingdom |                       | 2      | 1             |  |       |
| 43C            | bs                    |        | FE430-C       |  | np    |
| Gr 43C         | bs                    |        | China         |  |       |
| Spain          |                       | 2      | 1             |  |       |
| AE255C         | une                   |        | Q275          |  | gb    |
| AE275C         | une                   |        | Italy         |  |       |
| Russia / CIS   |                       | 2      | 1             |  |       |
| St4ps          | gost                  |        | Fe430C        |  | uni   |
| St4sp          | gost                  |        | Poland        |  |       |
| Hungary        |                       | 2      | 1             |  |       |
| 45 C           | msz                   |        | St4W          |  | pn    |
| Fe 275 C       | msz                   |        | South Africa  |  |       |
|                |                       |        | 1             |  |       |
|                |                       |        | 300 WC        |  | sans  |
|                |                       |        | Austria       |  |       |
|                |                       |        | 1             |  |       |
|                |                       |        | St430C        |  | onorm |
|                |                       |        | Belgium       |  |       |
|                |                       |        | 1             |  |       |
|                |                       |        | AE295C        |  | nbn   |

**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 AE255C

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

[Start an enquiry](#)

DATASHEET ONLINE

[View the material page](#)

GRADE SEARCH

[Search all grades](#)

MATERIAL NO.

1.0143

ISSUED

Aug 20, 2026