

MATERIAL NUMBER 1.0570 · CLASS 1.0

# CHS17

## Material no. 1.0570

also listed as S355J2

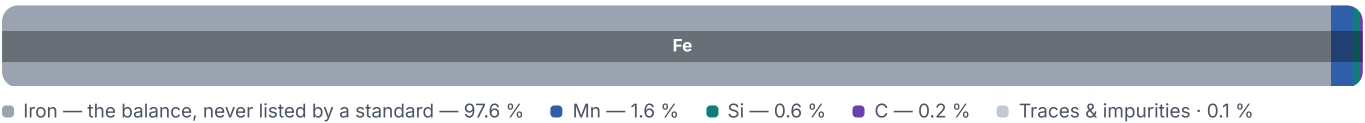
Chemical composition, mechanical and physical property values, and 112 standard designations from 21 regions.

|                                          |                                                |                                      |
|------------------------------------------|------------------------------------------------|--------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>112</b> in 21 regions | PROPERTY VALUES<br><b>11</b> on file |
|------------------------------------------|------------------------------------------------|--------------------------------------|

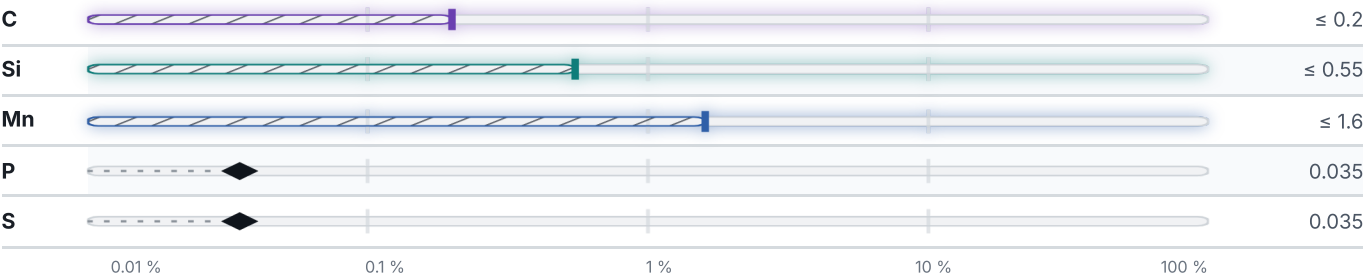
Chemical composition

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

29 values across 3 conditions

| FLAT AND LONG PRODUCTS | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> |
|------------------------|--------------------------|-------------------------|
| ≤ 3                    | —                        | 510–680                 |

| FLAT AND LONG PRODUCTS | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> |         |
|------------------------|--------------------------|-------------------------|---------|
| 3 – 100                | –                        | 470–630                 |         |
| ≤ 16                   | 355                      | –                       |         |
| 16 – 40                | 345                      | –                       |         |
| 40 – 63                | 335                      | –                       |         |
| 63 – 80                | 325                      | –                       |         |
| 80 – 100               | 315                      | –                       |         |
| 100 – 150              | 295                      | 450–600                 |         |
| 150 – 250              | –                        | 450–600                 |         |
| 150 – 200              | 285                      | –                       |         |
| 200 – 250              | 275                      | –                       |         |
| 250 – 400              | –                        | 450–600                 |         |
| CONDITION · DIMENSION  | A80<br>% · Lo = 80 mm    | A<br>% · Lo = 5,65 √So  |         |
| ≤ 1                    | 14                       | –                       |         |
| 1 – 1.5                | 15                       | –                       |         |
| 1.5 – 2                | 16                       | –                       |         |
| 2 – 2.5                | 17                       | –                       |         |
| 2.5 – 3                | 18                       | –                       |         |
| 3 – 40                 | –                        | 22                      |         |
| 40 – 63                | –                        | 21                      |         |
| 63 – 100               | –                        | 20                      |         |
| 100 – 150              | –                        | 18                      |         |
| 150 – 250              | –                        | 17                      |         |
| CONDITION · DIMENSION  | RM<br>N/mm <sup>2</sup>  | RE<br>N/mm <sup>2</sup> | A5<br>% |
| Sheet, GOST 5520-79    | 490–510                  | 335–345                 | 23      |
| Pipe, GOST 10705-80    | 490                      | 343                     | 20      |

## Physical properties

6 values

| PROPERTY                 | VALUE | UNIT              |
|--------------------------|-------|-------------------|
| Density                  | 7.85  | g/cm <sup>3</sup> |
| Transformation point Ac1 | 745   | °C                |

| PROPERTY                 | VALUE | UNIT |
|--------------------------|-------|------|
| Transformation point Ac3 | 870   | °C   |
| Transformation point Ar3 | 790   | °C   |
| Transformation point Ar1 | 680   | °C   |

## Technological properties

| PROPERTY    | VALUE                | UNIT |
|-------------|----------------------|------|
| Weldability | without limitations. |      |

## Designations across standards

112 designations · 9 documented as identical

|                       |     |                               |          |
|-----------------------|-----|-------------------------------|----------|
| <b>United Kingdom</b> | 16  | <b>Russia / CIS</b>           | 11       |
| 1449-50/35HR          | bs  | 17G1S                         | gost     |
| 1449-50/35HS          | bs  | 17G1S-U                       | gost     |
| 4360 50 B             | bs  | 17GS                          | gost     |
| 4360-50C              | bs  | 17GS-1                        | gost     |
| 4360-50D              | bs  | 17Г1C                         | gost     |
| 50C                   | bs  | 17ГC                          | gost     |
| 50D                   | bs  | 35                            | gost     |
| CEW5                  | bs  | CHS17                         | gost     |
| D1FF                  | bs  | S345                          | gost     |
| ERW5                  | bs  | C345                          | gost     |
| Fe510                 | bs  | сг.17ГC                       | gost     |
| Fe510D1FF             | bs  |                               |          |
| Gr 50D                | bs  | <b>Italy</b>                  | 11       |
| S355J0                | bs  | Fe510                         | uni      |
| S355J2G3              | bs  | Fe510B                        | uni      |
| SAW5                  | bs  | Fe510C                        | uni      |
|                       |     | Fe510CFN                      | uni      |
| <b>Japan</b>          | 14  | Fe510D                        | uni      |
| SM490                 | jis | Fe52BFN                       | uni      |
| SM490A                | jis | Fe52CFN                       | uni      |
| SM490B                | jis | FeE420                        | uni      |
| SM490C                | jis | S355J0                        | uni      |
| SM490YA               | jis | S355J2G3                      | uni      |
| SM490YB               | jis | S355JR                        | uni      |
| SM50A                 | jis |                               |          |
| SM520B                | jis | <b>United States</b>          | 7        |
| SM520C                | jis | K03011 This grade's own name  | uns      |
| SM53C                 | jis | K03014 This grade's own name  | uns      |
| SS490C                | jis | K12037 This grade's own name  | uns      |
| STK490                | jis | K12709 This grade's own name  | uns      |
| STKM16C               | jis | 1024 This grade's own name    | aisi-sae |
| STKR490               | jis | Gr.50type1-4                  | aisi-sae |
|                       |     | A350LF2 This grade's own name | astm     |

|                                             |        |                     |       |
|---------------------------------------------|--------|---------------------|-------|
| <b>Poland</b>                               | 7      | <b>Czechia</b>      | 4     |
| 15GA                                        | pn     | 11438               | csn   |
| 16G2                                        | pn     | 11483               | csn   |
| 18G2                                        | pn     | 11503               | csn   |
| 18G2A                                       | pn     | 11523               | csn   |
| 18G2AA                                      | pn     |                     |       |
| 18G2ACu                                     | pn     | <b>Hungary</b>      | 4     |
| G355                                        | pn     | 45D                 | msz   |
|                                             |        | B50.36              | msz   |
| <b>China</b>                                | 6      | Fe355C/FF           | msz   |
| 16Mn                                        | gb     | S355J2G3            | msz   |
| 16MnDR                                      | gb     |                     |       |
| 16Mng                                       | gb     | <b>Romania</b>      | 2     |
| 16MnL                                       | gb     | OL52.3              | stas  |
| 16MnR                                       | gb     | OL52.4              | stas  |
| HP345                                       | gb     |                     |       |
| <b>Sweden</b>                               | 6      | <b>Bulgaria</b>     | 2     |
| 2132                                        | ss     | 17GS                | bds   |
| 2133                                        | ss     | S355J2G3            | bds   |
| 2134                                        | ss     |                     |       |
| 2135-01                                     | ss     | <b>South Africa</b> | 2     |
| 2172                                        | ss     | 350 WDD             | sans  |
| 2174                                        | ss     | 350WD               | sans  |
| <b>France</b>                               | 5      | <b>Austria</b>      | 2     |
| E36-3                                       | afnor  | St510D              | onorm |
| E36-4                                       | afnor  | St52F               | onorm |
| S355J0                                      | afnor  |                     |       |
| S355J2G3                                    | afnor  | <b>Slovakia</b>     | 1     |
| S355K2G3                                    | afnor  | 11 503              | stn   |
| <b>Spain</b>                                | 5      | <b>Serbia</b>       | 1     |
| A510C                                       | une    | Č.0563              | srps  |
| AE355D                                      | une    |                     |       |
| Fe510D1FF                                   | une    | <b>Belgium</b>      | 1     |
| S355J2G3                                    | une    | FE510D1FF           | nbn   |
| S355J2G4                                    | une    |                     |       |
| <b>Europe</b>                               | 4      | <b>South Korea</b>  | 1     |
| 1.0570                                      | din-en | STKM16C             | ks    |
| S355J2 <span>This grade's own name</span>   | din-en |                     |       |
| S355J2G3 <span>This grade's own name</span> | din-en |                     |       |
| St 52-3 <span>This grade's own name</span>  | din-en |                     |       |

**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 CHS17

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.

1.0570

ISSUED

Aug 20, 2026