

MATERIAL NUMBER 1.0035 · CLASS 1.0

# St 33

## Material no. 1.0035

also listed as S185

Chemical composition, mechanical and physical property values, and 80 standard designations from 22 regions.

|                                          |                                               |                                     |
|------------------------------------------|-----------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>80</b> in 22 regions | PROPERTY VALUES<br><b>1</b> on file |
|------------------------------------------|-----------------------------------------------|-------------------------------------|

Chemical composition

Mass fraction in %

No chemical composition is on file for this material number.

### Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: C, Mn, Si, Ni, Cr, Mo.

Mechanical properties

26 values across 3 conditions

| FLAT AND LONG PRODUCTS | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> |
|------------------------|--------------------------|-------------------------|
| ≤ 3                    | —                        | 310–540                 |
| 3 – 100                | —                        | 290–510                 |
| ≤ 16                   | 185                      | —                       |
| 16 – 40                | 175                      | —                       |
| 40 – 63                | 175                      | —                       |
| 63 – 80                | 175                      | —                       |
| 80 – 100               | 175                      | —                       |
| 100 – 150              | 165                      | 280–500                 |

| FLAT AND LONG PRODUCTS      |  | REH<br>N/mm <sup>2</sup> | RM<br>N/mm <sup>2</sup> |         |        |
|-----------------------------|--|--------------------------|-------------------------|---------|--------|
| 150 – 250                   |  | –                        | 270–490                 |         |        |
| 150 – 200                   |  | 155                      | –                       |         |        |
| CONDITION · DIMENSION       |  | A80<br>% · Lo = 80 mm    | A<br>% · Lo = 5,65 √So  |         |        |
| ≤ 1                         |  | 10                       | –                       |         |        |
| 1 – 1.5                     |  | 11                       | –                       |         |        |
| 1.5 – 2                     |  | 12                       | –                       |         |        |
| 2 – 2.5                     |  | 13                       | –                       |         |        |
| 2.5 – 3                     |  | 14                       | –                       |         |        |
| 3 – 40                      |  | –                        | 18                      |         |        |
| 40 – 63                     |  | –                        | 17                      |         |        |
| 63 – 100                    |  | –                        | 16                      |         |        |
| 100 – 150                   |  | –                        | 15                      |         |        |
| 150 – 250                   |  | –                        | 15                      |         |        |
| CONDITION · DIMENSION       |  | RM<br>N/mm <sup>2</sup>  | RE<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% |
| Rolled stock, GOST 535-2005 |  | 305–390                  | 165–195                 | 32–35   | –      |
| Wire rods , GOST 30136-95   |  | 420–470                  | –                       | –       | 66–68  |

## Physical properties

1 values

| CONDITION · DIMENSION |  |       | RHO<br>g/cm³ |
|-----------------------|--|-------|--------------|
| 20                    |  |       | 7.85         |
| PROPERTY              |  | VALUE | UNIT         |
| Density               |  | 7.85  | g/cm³        |

## Designations across standards

80 designations · 3 documented as identical

| Russia / CIS   |          | 27 | Europe        |                       | 4      |
|----------------|----------|----|---------------|-----------------------|--------|
| 07Kh24N8M2D3L  | gost     |    | Fe310-0       |                       | din-en |
| 07X24H8M2Д3Л   | gost     |    | Gr.A          |                       | din-en |
| 18Kh15N3M-Sh   | gost     |    | S185          | This grade's own name | din-en |
| 18X15H3M       | gost     |    | St 33         | This grade's own name | din-en |
| 18X15H3M-Ш     | gost     |    |               |                       |        |
| 20             | gost     |    | China         |                       | 4      |
| PA-ZhF1K       | gost     |    | Q195          |                       | gb     |
| PA-ZhGrDK1     | gost     |    | Q195-b        |                       | gb     |
| PA-ZhGrF1K     | gost     |    | Q195-F        |                       | gb     |
| PZhV1          | gost     |    | Q195-Z        |                       | gb     |
| S235           | gost     |    |               |                       |        |
| ST0            | gost     |    | Hungary       |                       | 4      |
| St1kp          | gost     |    | A0            |                       | msz    |
| St1ps          | gost     |    | Fe 310-0      |                       | msz    |
| St1sp          | gost     |    | Fe3100        |                       | msz    |
| ВКЛ-1          | gost     |    | S185          |                       | msz    |
| ДИ1            | gost     |    |               |                       |        |
| ДИ1-Ш          | gost     |    | Czechia       |                       | 3      |
| ЖГр0.5Д3К0.8   | gost     |    | 10000         |                       | csn    |
| ЖГр1.2Д2.5К0.8 | gost     |    | 10004         |                       | csn    |
| ЖГр1Д2.5К      | gost     |    | 11343         |                       | csn    |
| ЖФ1К1          | gost     |    |               |                       |        |
| ЖФ1К1Гр0.8     | gost     |    | Bulgaria      |                       | 3      |
| C235           | gost     |    | ASt0          |                       | bds    |
| Ст0            | gost     |    | ASt1          |                       | bds    |
| Ст0 Ст1кп      | gost     |    | S185          |                       | bds    |
| Ст1кп          | gost     |    |               |                       |        |
|                |          |    | France        |                       | 2      |
| United States  |          | 7  | A33           |                       | afnor  |
| A283           | aisi-sae |    | S185          |                       | afnor  |
| A283A          | aisi-sae |    |               |                       |        |
| A283B          | aisi-sae |    | Spain         |                       | 2      |
| A366           | aisi-sae |    | A310-0        |                       | une    |
| A570           | aisi-sae |    | S185          |                       | une    |
| Gr.A           | aisi-sae |    |               |                       |        |
| A 283 Grade A  | astm     |    | International |                       | 2      |
|                |          |    | E185          |                       | iso    |
|                |          |    | Fe310         |                       | iso    |
|                |          |    |               |                       |        |
|                |          |    | Japan         |                       | 2      |
| 15HR           | bs       |    | SS300         |                       | jis    |
| 15HS           | bs       |    | SS330         |                       | jis    |
| Fe310-0        | bs       |    |               |                       |        |
| HR 15          | bs       |    | Italy         |                       | 2      |
| S185           | bs       |    | Fe320         |                       | uni    |
|                |          |    | S185          |                       | uni    |

|          |       |                                          |      |
|----------|-------|------------------------------------------|------|
| Sweden   | 2     | Portugal                                 | 1    |
| 1300     | ss    | Fe310-0                                  | np   |
| 1300-00  | ss    |                                          |      |
| Slovakia | 2     | Poland                                   | 1    |
| 10 000   | stn   | St0S                                     | pn   |
| 10 004   | stn   |                                          |      |
| Austria  | 2     | Romania                                  | 1    |
| St00H    | onorm | OL32.1                                   | stas |
| St320    | onorm |                                          |      |
| Belgium  | 2     | Finland                                  | 1    |
| A320     | nbn   | Fe33                                     | sfs  |
| FE310-0  | nbn   | South Korea                              | 1    |
|          |       | SS330 <span>This grade's own name</span> | ks   |

**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 St 33

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

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