

MATERIAL NUMBER 1.1165 · CLASS 1.1

# F.8311

## Material no. 1.1165

also listed as G28Mn6

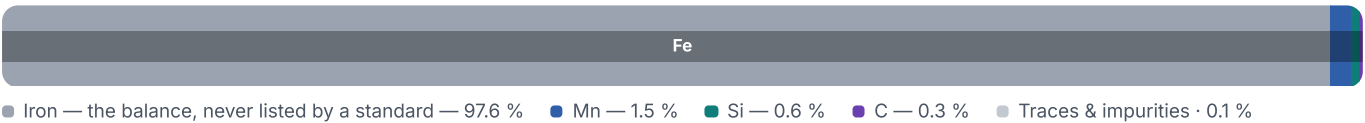
Chemical composition, mechanical and physical property values, and 56 standard designations from 16 regions.

|                                          |                                               |                                     |
|------------------------------------------|-----------------------------------------------|-------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>56</b> in 16 regions | PROPERTY VALUES<br><b>9</b> on file |
|------------------------------------------|-----------------------------------------------|-------------------------------------|

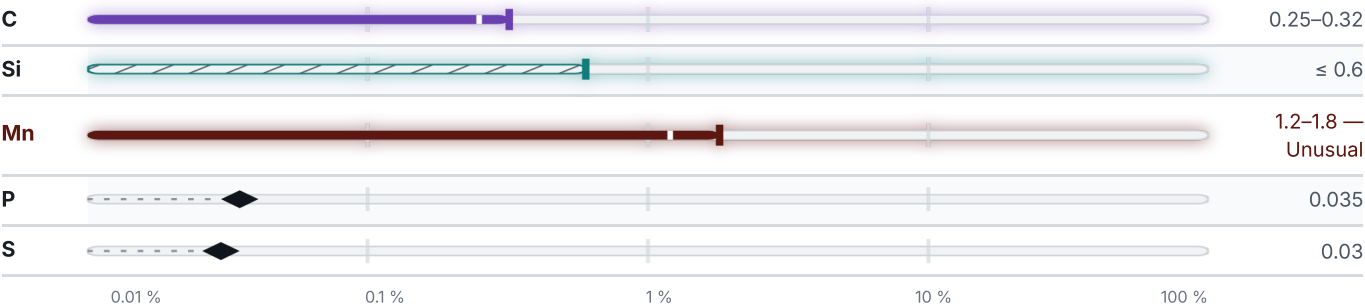
Chemical composition

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

10 values across 2 conditions

| NORMALIZING 870 - 890°C,DRAWING 570 - 600°C | RM<br>N/mm² | RE<br>N/mm² | A5<br>% | Z<br>% | KCU<br>kJ/m² |
|---------------------------------------------|-------------|-------------|---------|--------|--------------|
| to 100                                      | 589         | 343         | 14      | 25     | 294          |

| CONDITION · DIMENSION | RM<br>N/mm² | RE<br>N/mm² | A5<br>% | Z<br>% | KCU<br>kJ/m² |
|-----------------------|-------------|-------------|---------|--------|--------------|
| Casting, GOST 977-88  | 638         | 392         | 14      | 30     | 491          |

Physical properties

4 values

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

Technological properties

| PROPERTY           | VALUE             | UNIT |
|--------------------|-------------------|------|
| Weldability        | hard weldability. |      |
| Flake sensitivity  | not predisposed   |      |
| Temper brittleness | not predisposed   |      |

Designations across standards

56 designations · 4 documented as identical

|                 |                          |               |      |
|-----------------|--------------------------|---------------|------|
| United States10 |                          | Spain6        |      |
| D50500          | This grade's own nameuns | 30Mn5         | une  |
| G13300          | uns                      | AM30Mn5       | une  |
| H1330           | uns                      | F.1203        | une  |
| 1036            | aisi-sae                 | F.1203-36Mn5  | une  |
| 1132            | aisi-sae                 | F.8211        | une  |
| 1330            | aisi-sae                 | F.8311        | une  |
| 1330H           | aisi-sae                 |               |      |
| G11320          | aisi-sae                 | Japan6        |      |
| G13300          | aisi-sae                 | SCMn2         | jis  |
| H13300          | aisi-sae                 | SCSiMn2       | jis  |
|                 |                          | SMn423H       | jis  |
| United Kingdom8 |                          | SMn433        | jis  |
| 120M36          | bs                       | SMn433H       | jis  |
| 150M28          | bs                       | SMn438        | jis  |
| 150M36          | bs                       |               |      |
| 38Cr2           | bs                       | Russia / CIS4 |      |
| A5              | bs                       | 30G2          | gost |
| A6              | bs                       | 30GSL         | gost |
| En15            | bs                       | 30Г2          | gost |
| En15A           | bs                       | 30ГCЛ         | gost |

|                                               |        |
|-----------------------------------------------|--------|
| <b>Europe</b>                                 | 3      |
| G28Mn6 <span>This grade's own name</span>     | din-en |
| GS-30 Mn 5 <span>This grade's own name</span> | din-en |
| GS-30Mn5V                                     | din-en |
| <b>France</b>                                 | 3      |
| 30Mn5                                         | afnor  |
| 35M5                                          | afnor  |
| 40M5                                          | afnor  |
| <b>China</b>                                  | 3      |
| 30Mn2                                         | gb     |
| 80 <span>This grade's own name</span>         | gb     |
| ZG35SiMn                                      | gb     |
| <b>Bulgaria</b>                               | 3      |
| 30G2                                          | bds    |
| 30GL                                          | bds    |
| 30GSL                                         | bds    |

|                    |      |
|--------------------|------|
| <b>Italy</b>       | 2    |
| 28Mn6              | uni  |
| C28Mn              | uni  |
| <b>Hungary</b>     | 2    |
| Ao30MnSi5          | msz  |
| AO35MnSi5          | msz  |
| <b>Romania</b>     | 2    |
| T30Mn14R           | stas |
| T30SiMn12          | stas |
| <b>Czechia</b>     | 1    |
| 13141              | csn  |
| <b>Poland</b>      | 1    |
| 30G2               | pn   |
| <b>Belgium</b>     | 1    |
| 28Mn6              | nbn  |
| <b>South Korea</b> | 1    |
| SCMn2              | 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 F.8311

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

[Start an enquiry](#)

#### DATASHEET ONLINE

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#### GRADE SEARCH

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#### ISSUED

Aug 20, 2026