SteelEquivalents.com

Material datasheet
As of Sep 8, 2026

MATERIAL NUMBER 1.6580 · CLASS 1.6

# 16435

## Material no. 1.6580

also listed as 30CrNiMo8

Chemical composition, mechanical and physical property values, and 29 standard designations from 14 regions.

| DENSITY | OTHER DESIGNATIONS | PROPERTY VALUES |
|---|---|---|
| 7.76 g/cm³ | 29 in 14 regions | 12 on file |

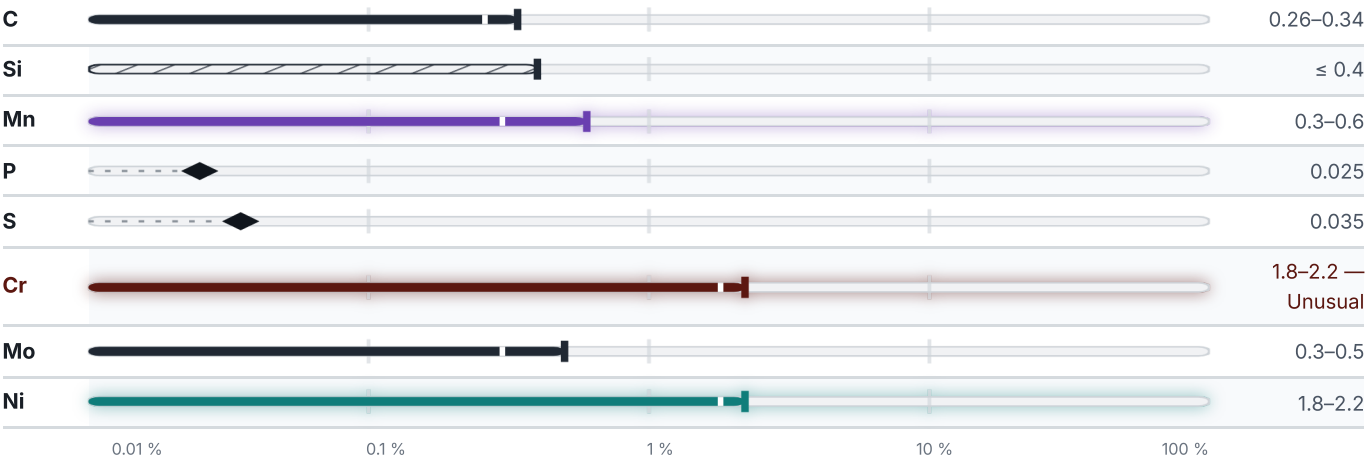
## Chemical composition

Mass fraction in %

What this alloy is


Iron — the balance, never listed by a standard — 94.4 % · Cr — 2 % · Ni — 2 % · Mn — 0.4 % · Traces & impurities · 1.2 %

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

## Mechanical properties

12 values across 4 conditions

| QUENCHED AND TEMPERED · ROUND PRODUCTS | A % · Lo = 5,65 √So |
|---|---|
| ≤ 16 | 9 |
| 16 – 40 | 9 |
| 40 – 100 | 10 |
| 100 – 160 | 11 |
| 160 – 250 | 12 |

| SOFT ANNEALED | HB |
|---|---|
| Soft annealed | 248–255 |

| QUENCHING AND DRAWING | RM N/mm² | RE N/mm² | A5 % | Z % | KCU kJ/m² |
|---|---|---|---|---|---|
| Ø 15 | 980 | 785 | 10 | 45 | 780 |

| CONDITION · DIMENSION | HB |
|---|---|
| 30KHN2MA ( 30XH2MA ) (annealing) , GOST 4543-71 | 241 |

## Physical properties

4 values

| CONDITION · DIMENSION | E GPa |
|---|---|
| 20 | 204 |
| 100 | 201 |
| 200 | 194 |
| 300 | 186 |
| 400 | 182 |
| 500 | 171 |
| 600 | 159 |

| PROPERTY | VALUE | UNIT |
|---|---|---|
| Density | 7.76 | g/cm³ |
| Transformation point Ac1 | 730 | °C |
| Transformation point Ac3 | 775 | °C |

### Technological properties

| PROPERTY | VALUE | UNIT |
|---|---|---|
| Flake sensitivity | predisposed | |

## Heat treatment

1 regimes

| STEP | TEMPERATURE | MEDIUM |
|---|---|---|
| **source joins the operations with + / procedural order** | | |
| Quenching | Temperature not stated | — |
| Tempering | Temperature not stated | — |

## Designations across standards

29 designations · 3 documented as identical

### United States / Aerospace 5

| | |
|---|---|
| 6359 | ams |
| 6409 | ams |
| 6414 | ams |
| 6415 | ams |
| 6454 | ams |

### Russia / CIS 4

| | |
|---|---|
| 30KHN2MA | gost |
| 30XH2MA | gost |
| 30XHMA | gost |
| 3KH3M3F | gost |

### United States 3

| | |
|---|---|
| G43400 | uns |
| 4340 | aisi-sae |
| A829 | astm |

### Czechia 3

| | |
|---|---|
| 16430VN | csn |
| 16430ŽH | csn |
| 16435 | csn |

### United Kingdom 2

| | |
|---|---|
| 823M30 | bs |
| 823M40 This grade's own name | bs |

### France 2

| | |
|---|---|
| 30CND8 | afnor |
| 30NCD8 This grade's own name | afnor |

### Japan 2

| | |
|---|---|
| SNCM431 | jis |
| SNCM439 | jis |

### Poland 2

| | |
|---|---|
| 30H2N2A | pn |
| 30H2N2M | pn |

### Europe 1

| | |
|---|---|
| 30CrNiMo8 This grade's own name | din-en |

### International 1

| | |
|---|---|
| 31CrNiMo8 | iso |

### China 1

| | |
|---|---|
| 30Cr2Ni2Mo | gb |

### Serbia 1

| | |
|---|---|
| Č.5432 | srps |

### Croatia 1

| | |
|---|---|
| Č.5432 | hrn |

### Hungary 1

| | |
|---|---|
| NCMo 6 | msz |

**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 16435**

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

Start an enquiry

| DATASHEET ONLINE | GRADE SEARCH | MATERIAL NO. | ISSUED |
|---|---|---|---|
| View the material page | Search all grades | 1.6580 | Sep 8, 2026 |