

MATERIAL NUMBER 1.4833 · CLASS 1.4

# Z15CN23-13

Material no. 1.4833

also listed as X 7 CrNi 23 14

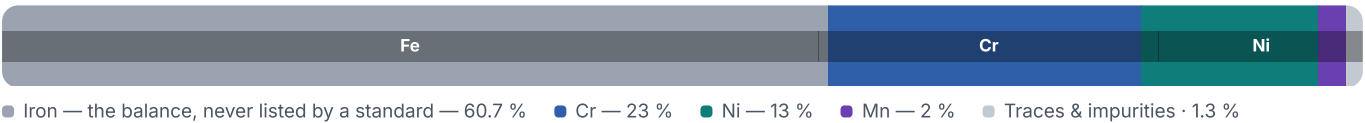
Chemical composition, mechanical and physical property values, and 69 standard designations from 14 regions.

|                             |                                               |                                      |
|-----------------------------|-----------------------------------------------|--------------------------------------|
| DENSITY<br><b>7.9</b> g/cm³ | OTHER DESIGNATIONS<br><b>69</b> in 14 regions | PROPERTY VALUES<br><b>11</b> on file |
|-----------------------------|-----------------------------------------------|--------------------------------------|

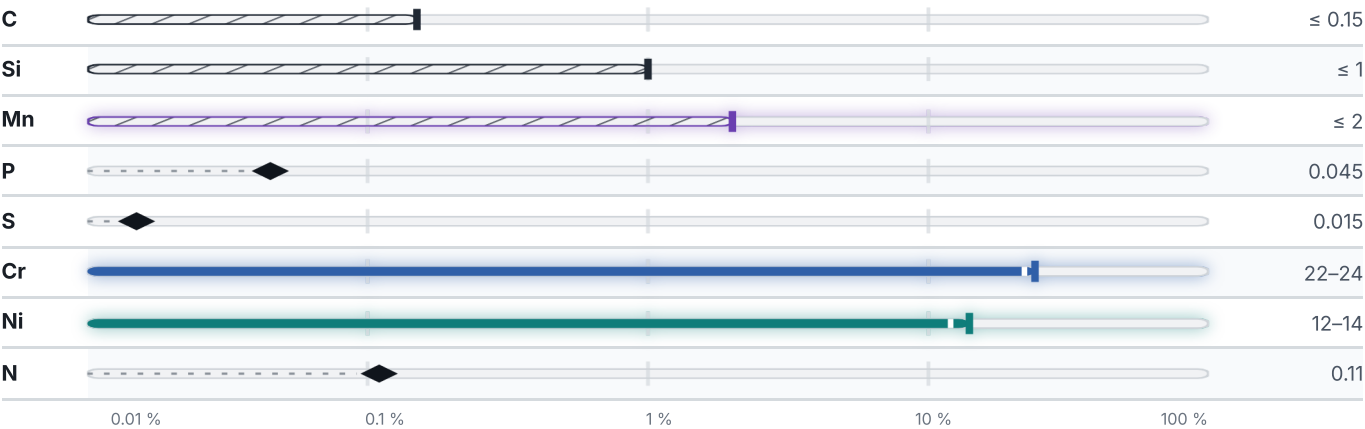
## Chemical composition

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: Mo.

## Mechanical properties

15 values across 5 conditions

| CONDITION · DIMENSION        | RM<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A<br>%                  | HB      | HRB | HV  |
|------------------------------|-------------------------|-------------------------|-------------------------|---------|-----|-----|
| Plate/Sheet Hot-rolled       | 520                     | 205                     | 40                      | –       | –   | –   |
| Hot-rolled                   | –                       | –                       | –                       | 187     | 90  | 200 |
| SOLUTION ANNEALED            |                         |                         |                         |         |     | HB  |
| Solution annealed            |                         |                         |                         |         |     | 192 |
| QUENCHING 1100 - 1150°C, AIR | RM<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A5<br>%                 | Z<br>%  |     |     |
| Ø 60                         | 490                     | 295                     | 35                      | 50      |     |     |
| CONDITION · DIMENSION        |                         |                         | RM<br>N/mm <sup>2</sup> | A5<br>% |     |     |
| Sheet trick, GOST 7350-77    |                         |                         | 570                     | 35      |     |     |
| CONDITION · DIMENSION        |                         |                         | RM<br>N/mm <sup>2</sup> | A5<br>% |     |     |
| Sheet thin, GOST 5582-75     |                         |                         | 540                     | 35      |     |     |

## Physical properties

3 values

| CONDITION · DIMENSION | RHO<br>g/cm³ | E<br>GPa | ALPHA<br>10 <sup>-6</sup> /K | LAMBDA<br>W/(m·K) | CP<br>J/(kg·K) |
|-----------------------|--------------|----------|------------------------------|-------------------|----------------|
| 20                    | 7.82         | 207      | –                            | –                 | –              |
| 100                   | 7.79         | –        | 14.9                         | –                 | 538            |
| 200                   | –            | –        | 15.7                         | 17                | –              |
| 300                   | –            | –        | 16.6                         | 19                | –              |
| 400                   | –            | –        | 17.1                         | 21                | –              |
| 500                   | –            | –        | 17.5                         | 23                | –              |
| 600                   | 7.58         | –        | 17.8                         | 24                | –              |
| 700                   | –            | –        | 18.2                         | 27                | –              |
| 800                   | 7.48         | –        | –                            | 29                | –              |
| 900                   | –            | –        | –                            | 31                | –              |
| PROPERTY              |              |          | VALUE                        | UNIT              |                |
| Density               |              |          | 7.9                          | g/cm³             |                |

## Technological properties

| PROPERTY           | VALUE                | UNIT |
|--------------------|----------------------|------|
| Weldability        | limited weldability. |      |
| Temper brittleness | predisposed          |      |

## Designations across standards

69 designations · 5 documented as identical

| United States |                       | 34       | Japan                     |                       | 5      |
|---------------|-----------------------|----------|---------------------------|-----------------------|--------|
| S30900        |                       | uns      | SUH 309                   |                       | jis    |
| S30908        | This grade's own name | uns      | SUS 309S                  |                       | jis    |
| 30309         |                       | aisi-sae | SUS 309STP                |                       | jis    |
| 30309S        |                       | aisi-sae | SUS309                    |                       | jis    |
| 309           |                       | aisi-sae | SUS309STB                 |                       | jis    |
| 309S          | This grade's own name | aisi-sae |                           |                       |        |
| MT309         |                       | aisi-sae | United Kingdom            |                       | 4      |
| MT309S        |                       | aisi-sae | 309S                      |                       | bs     |
| S30900        |                       | aisi-sae | 309S16                    |                       | bs     |
| S30908        |                       | aisi-sae | 309S24                    |                       | bs     |
| A1012         |                       | astm     | X12CrNi23-13              |                       | bs     |
| A167          |                       | astm     |                           |                       |        |
| A213          |                       | astm     | France                    |                       | 4      |
| A240          |                       | astm     | Z10CNS20-12               |                       | afnor  |
| A249          |                       | astm     | Z15CN23-13                |                       | afnor  |
| A264          |                       | astm     | Z15CN24-13                |                       | afnor  |
| A276          |                       | astm     | Z17CNS20-12               |                       | afnor  |
| A312          |                       | astm     |                           |                       |        |
| A314          |                       | astm     | United States / Aerospace |                       | 4      |
| A358          |                       | astm     | 5523                      |                       | ams    |
| A403          |                       | astm     | 5574                      |                       | ams    |
| A409          |                       | astm     | 5650                      |                       | ams    |
| A473          |                       | astm     | 7490                      |                       | ams    |
| A478          |                       | astm     |                           |                       |        |
| A479          |                       | astm     | Russia / CIS              |                       | 4      |
| A480          |                       | astm     | 20KH23N13                 |                       | gost   |
| A511          |                       | astm     | 20X23H13                  |                       | gost   |
| A554          |                       | astm     | X23H13                    |                       | gost   |
| A580          |                       | astm     | ЭИ319                     |                       | gost   |
| A813          |                       | astm     |                           |                       |        |
| A814          |                       | astm     | Europe                    |                       | 3      |
| A924          |                       | astm     | X 7 CrNi 23 14            | This grade's own name | din-en |
| A943          |                       | astm     | X12CrNi23-13              | This grade's own name | din-en |
| F2281         |                       | astm     | X18CrNi23-13              | This grade's own name | din-en |
|               |                       |          | Poland                    |                       | 3      |
|               |                       |          | H18N9S                    |                       | pn     |
|               |                       |          | H20N12S2                  |                       | pn     |
|               |                       |          | H23N13                    |                       | pn     |

|              |     |               |      |
|--------------|-----|---------------|------|
| China        | 2   | International | 1    |
| 0Cr23Ni13    | gb  | X6CrNi23-14   | iso  |
| 2Cr23Ni13    | gb  |               |      |
| Italy        | 2   | Romania       | 1    |
| X16CrNi23-14 | uni | 15SiNiCr200   | stas |
| X6CrNi2314   | uni | South Korea   | 1    |
| Spain        | 1   | STS309S       | ks   |
| X12CrNi23-13 | une |               |      |

**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 Z15CN23-13

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

[Start an enquiry](#)

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