

MATERIAL NUMBER 1.0762 · CLASS 1.0

# 45G2

## Material no. 1.0762

also listed as 44 SMn 28

Chemical composition, mechanical and physical property values, and 52 standard designations from 19 regions.

|                                          |                                               |                                      |
|------------------------------------------|-----------------------------------------------|--------------------------------------|
| DENSITY<br><b>7.85</b> g/cm <sup>3</sup> | OTHER DESIGNATIONS<br><b>52</b> in 19 regions | PROPERTY VALUES<br><b>10</b> on file |
|------------------------------------------|-----------------------------------------------|--------------------------------------|

Chemical composition

Mass fraction in %



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

18 values across 4 conditions

| COLD DRAWN / HARD | RM<br>N/mm <sup>2</sup> | A<br>% |
|-------------------|-------------------------|--------|
| 5 – 10            | 760–1030                | 5      |

| COLD DRAWN / HARD | RM<br>N/mm <sup>2</sup> | A<br>% |
|-------------------|-------------------------|--------|
| 10 – 16           | 710–980                 | 5      |
| 16 – 40           | 660–900                 | 6      |
| 40 – 63           | 650–870                 | 7      |
| 63 – 100          | 630–840                 | 7      |

  

| CONDITION · DIMENSION                   | RM<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% | HB  |
|-----------------------------------------|-------------------------|---------|--------|-----|
| Rolled stock hotrolled, GOST 1414-75    | 590                     | 14      | 20     | –   |
| Rolled stock GOST 1414-75               | –                       | –       | –      | 207 |
| (annealing) , Rolled stock GOST 1414-75 | –                       | –       | –      | 229 |

  

| CONDITION · DIMENSION                  | RM<br>N/mm <sup>2</sup> | A5<br>% |
|----------------------------------------|-------------------------|---------|
| Rolled stock cold-drawn , GOST 1414-75 | 590                     | 17      |

  

| AS ROLLED AND TURNED | HB      |
|----------------------|---------|
| As rolled and turned | 181–242 |

## Physical properties

5 values

| PROPERTY                 | VALUE | UNIT              |
|--------------------------|-------|-------------------|
| Density                  | 7.85  | g/cm <sup>3</sup> |
| Transformation point Ac1 | 730   | °C                |
| Transformation point Ac3 | 830   | °C                |

## Technological properties

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

## Heat treatment

2 regimes

| STEP      | TEMPERATURE            | MEDIUM |
|-----------|------------------------|--------|
| Tempering | Temperature not stated | —      |
| Tempering | Temperature not stated | —      |

## Designations across standards

52 designations · 5 documented as identical

|                                            |          |                                              |        |
|--------------------------------------------|----------|----------------------------------------------|--------|
| <b>United States</b>                       | 13       | <b>Bulgaria</b>                              | 3      |
| G11440 <span>This grade's own name</span>  | uns      | 44SMn28                                      | bds    |
| 1141                                       | aisi-sae | 45G2                                         | bds    |
| 1144 <span>This grade's own name</span>    | aisi-sae | A45                                          | bds    |
| 1345                                       | aisi-sae |                                              |        |
| 1345H                                      | aisi-sae | <b>Europe</b>                                | 2      |
| C1144                                      | aisi-sae | 40S20                                        | din-en |
| G11410                                     | aisi-sae | 44 SMn 28 <span>This grade's own name</span> | din-en |
| G11440                                     | aisi-sae |                                              |        |
| G11444                                     | aisi-sae | <b>France</b>                                | 2      |
| G11460                                     | aisi-sae | 45MF4                                        | afnor  |
| G13450                                     | aisi-sae | 45MF6                                        | afnor  |
| H13450                                     | aisi-sae |                                              |        |
| C1144                                      | astm     | <b>International</b>                         | 2      |
| <b>Japan</b>                               | 6        | 35SMn20                                      | iso    |
| 44SMn28 <span>This grade's own name</span> | jis      | 44SMn28                                      | iso    |
| SMn3                                       | jis      |                                              |        |
| SMn433                                     | jis      | <b>Spain</b>                                 | 1      |
| SMn433H                                    | jis      | 45MnS6                                       | une    |
| SUM42                                      | jis      |                                              |        |
| SUM43                                      | jis      | <b>Italy</b>                                 | 1      |
|                                            |          | CF44SMn28                                    | uni    |
| <b>Russia / CIS</b>                        | 5        |                                              |        |
| 45G2                                       | gost     | <b>Sweden</b>                                | 1      |
| 45Г2                                       | gost     | 2120                                         | ss     |
| A40G                                       | gost     |                                              |        |
| A40G                                       | gost     | <b>Czechia</b>                               | 1      |
| A40Г                                       | gost     | 11140                                        | csn    |
|                                            |          |                                              |        |
| <b>United Kingdom</b>                      | 4        | <b>Latin America</b>                         | 1      |
| 216M36                                     | bs       | 1144                                         | copant |
| 225M36                                     | bs       |                                              |        |
| 226M44                                     | bs       | <b>Hungary</b>                               | 1      |
| 44SMn28                                    | bs       | ANS2                                         | msz    |
|                                            |          |                                              |        |
| <b>China</b>                               | 3        | <b>Romania</b>                               | 1      |
| 45Mn2                                      | gb       | AUT40Mn                                      | stas   |
| 45Mn2A                                     | gb       |                                              |        |
| Y40Mn                                      | gb       | <b>Australia / New Zealand</b>               | 1      |
|                                            |          | X1345                                        | as-nzs |
| <b>Poland</b>                              | 3        |                                              |        |
| 45G2                                       | pn       | <b>South Korea</b>                           | 1      |
| A35G2                                      | pn       | SUM43 <span>This grade's own name</span>     | ks     |
| A45                                        | pn       |                                              |        |

**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.

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**MATERIAL NO.**  
1.0762

**ISSUED**  
Aug 20, 2026