

# 1X8BΦ

also listed as 12Kh8

Chemical composition, mechanical and physical property values, and 4 standard designations from 1 regions.

| OTHER DESIGNATIONS | PROPERTY VALUES |
|--------------------|-----------------|
| 4 in 1 regions     | 8 on file       |

## Chemical composition

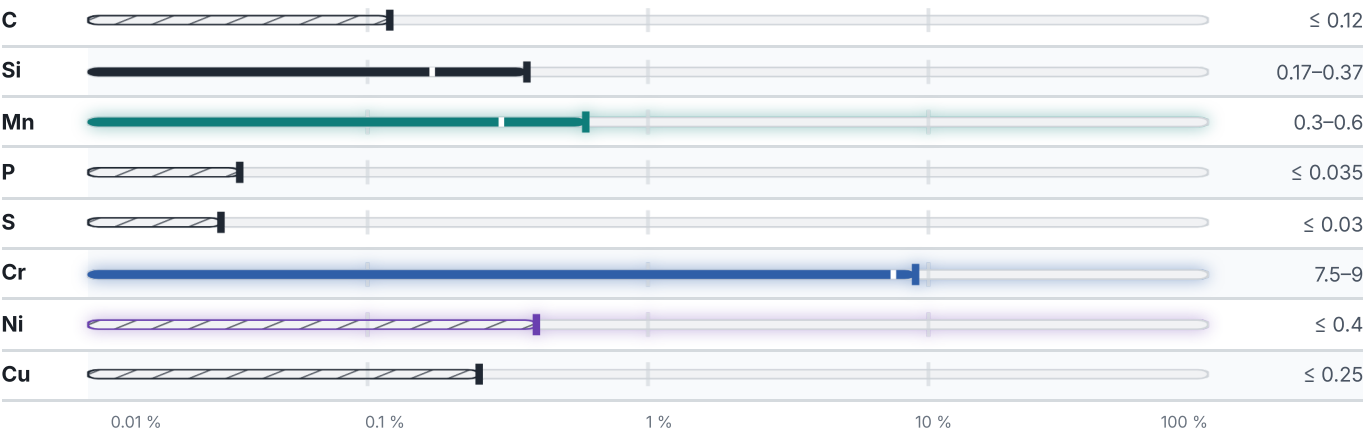
Mass fraction in %

What this alloy is



Iron — the balance, never listed by a standard — 90.2 %    Cr — 8.3 %    Mn — 0.4 %    Ni — 0.4 %    Traces & impurities · 0.7 %

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

12 values across 2 conditions

| CONDITION · DIMENSION                                      | RM<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% | KCU<br>kJ/m <sup>2</sup> | HB  |
|------------------------------------------------------------|-------------------------|-------------------------|---------|--------|--------------------------|-----|
| Pipe hot strain, GOST 550-75                               | 392                     | 167                     | 22      | 50     | 980                      | –   |
| 12KH8VF ( 12X8BΦ ) (hot-rolled, annealing) , GOST 20072-74 | –                       | –                       | –       | –      | –                        | 217 |
| 12KH8VF ( 12X8BΦ ) , Pipe GOST 550-75                      | –                       | –                       | –       | –      | –                        | 170 |

| CONDITION · DIMENSION | RM<br>N/mm <sup>2</sup> | RE<br>N/mm <sup>2</sup> | A5<br>% | Z<br>% | KCU<br>kJ/m <sup>2</sup> |
|-----------------------|-------------------------|-------------------------|---------|--------|--------------------------|
| Bar, GOST 20072-74    | 390                     | 165                     | 22      | 50     | 980                      |

Designations across standards

4 designations · 1 documented as identical

|                                          |      |
|------------------------------------------|------|
| Russia / CIS                             | 4    |
| 12Kh8 <span>This grade's own name</span> | gost |
| 12KH8VF                                  | gost |
| 12X8                                     | gost |
| 1X8BΦ                                    | gost |

**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 1X8BΦ

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

Start an enquiry

DATASHEET ONLINE

View the material page

GRADE SEARCH

Search all grades

MATERIAL NO.

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ISSUED

Aug 15, 2026