

This page is mainly introduced the 1.4986 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4986, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 1.4986

| 1.4986 Standard Number: |                  |  |
|-------------------------|------------------|--|
| ITEM                    | Standard Number  | Descriptions   |
| 1                       | DIN 17240 (1976) | Heat Resisting and Highly Heat Resisting Materials for Bolts and Nuts; Quality Specifications    |
| 2                       | DIN EN 10088-1   | Stainless steels - Part 1: List of stainless steels  |
| 3                       | DIN EN 10269     | Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties |
| 4                       | WB 113/1 (2001)  | Heat resistant austenitic rolled and forged steel, X 8 CrNiMoBNb 16 16, WN 1.4986                |
| 5                       | WB 113/2 (2001)  | Heat resistant austenitic rolled and forged steel, CrNiMoBNb X 8 16 16, WN 1.4986                |

| 1.4986 Chemical composition (mass fraction) (wt.%) |    |         |    |    |    |                                     |    |    |       |
|--|----|---------|----|----|----|-------------------------------------|----|----|-------|
| Chemical   |    | Min.(%) |    |    |    | Max.(%)                             |    |    |       |
| C  |    | 0.04    |    |    |    | 0.10                                |    |    |       |
| Si   |    | 0.30    |    |    |    | 0.60                                |    |    |       |
| Mn   |    |         |    |    |    | 1.50                                |    |    |       |
| P  |    |         |    |    |    | 0.045                               |    |    |       |
| S  |    |         |    |    |    | 0.030                               |    |    |       |
| Cr   |    | 15.5    |    |    |    | 17.5                                |    |    |       |
| Ni   |    | 15.5    |    |    |    | 17.5                                |    |    |       |
| Mo   |    | 1.60    |    |    |    | 2.00                                |    |    |       |
| B  |    | 0.05    |    |    |    | 0.10                                |    |    |       |
| Other  |    |         |    |    |    | Nb / Ta $\geq 10 \cdot C \leq 1.20$ |    |    |       |
| C  | Si | Mn      | P  | S  | Cr | Ni                                  | Mo | V  | Ta    |
| W  | N  | Cu      | Co | Pb | B  | Nb                                  | Al | Ti | Other |
|  |    |         |    |    |    |                                     |    |    |       |

DIN 17240 (1976) Heat Resisting and Highly Heat Resisting Materials for

## Bolts and Nuts; Quality Specifications; Replaced by DIN EN 10269:1999

| 1.4986 Physical Properties |         |                          |
|----------------------------|---------|--------------------------|
| Tensile strength           | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength             | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation                 | 65      | $\delta_5 \geq$ (%)      |
| $\psi$                     | -       | $\psi \geq$ (%)          |
| Akv                        | -       | Akv $\geq$ /J            |
| HBS                        | 123-321 | -                        |
| HRC                        | 30      | -                        |

| 1.4986 Mechanical Properties |         |                          |
|------------------------------|---------|--------------------------|
| Tensile strength             | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength               | 154     | $\sigma_{0.2} \geq$ /MPa |
| Elongation                   | 56      | $\delta_5 \geq$ (%)      |
| $\psi$                       | -       | $\psi \geq$ (%)          |
| Akv                          | -       | Akv $\geq$ /J            |
| HBS                          | 235-268 | -                        |
| HRC                          | 30      | -                        |

| 1.4986 Heat Treatment Regime |           |           |             |       |
|------------------------------|-----------|-----------|-------------|-------|
| Annealing                    | Quenching | Tempering | Normalizing | Q & T |
| √                            | √         | √         | √           | √     |

| 1.4986 Range of products |  |                            |   |   |
|--------------------------|--|----------------------------|---|---|
| Product type             | Products                                 | Dimension                  | Processes                                   | Deliver Status  |
| Plates / Sheets          | Plates / Sheets                          | 0.08-200mm(T)*W*L          | Forging, hot rolling and cold rolling       | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar                | Round Bar, Flat Bar, Square Bar          | Φ8-1200mm*L                | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting,                          |
| Coil / Strip             | Steel Coil /Steel Strip                  | 0.03-16.0x1200mm           | Cold-Rolled & Hot-Rolled                    | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes            | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded           | Annealed, Solution and Aging, Q+T, ACID-                      |

|  |  |  |  |        |
|--|--|--|--|--------|
|  |  |  |  | WASHED |
|--|--|--|--|--------|

**We can produce Specialsteel the specifications follows:**