

This page is mainly introduced the 1.4980 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4980, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Superalloys 1.4980

| 1.4980 Standard Number: | | |
|-------------------------|------------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | EN 10302: 2008 | Creep resisting steels, nickel and cobalt alloys |
| 2 | EN 10269: 1999 | Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties |
| 3 | EN 10088-1: 2005 | Stainless steels. List of stainless steels |

| 1.4980 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|---------|----|----|----|-------|
| Chemical | | Min.(%) | | | Max.(%) | | | | |
| C | | | | | 0.08 | | | | |
| Cr | | 13.50 | | | 16.00 | | | | |
| Ni | | 24.00 | | | 27.00 | | | | |
| Mo | | 1.00 | | | 1.50 | | | | |
| Ti | | 1.75 | | | 2.30 | | | | |
| V | | 0.10 | | | 0.50 | | | | |
| B | | 0.001 | | | 0.010 | | | | |
| Mn | | 1.00 | | | 2.00 | | | | |
| Fe | | | | | Bal | | | | |
| Al | | | | | 0.40 | | | | |
| Si | | | | | 1.00 | | | | |
| P | | | | | 0.030 | | | | |
| S | | | | | 0.020 | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Note: a cold pull rods, round cakes and ring blank standard (Ti) 1.80% ~ 2.35%.

2 (B) of hot-rolled and cold-rolled sheet standard 0.003% ~ 0.010%, 2.00% or less (Mn), (P) acuties were 0.020%, 0.015% or less (S).

3 (Al) of cold drawn wire standard acuties were 0.35%, 1.75% ~ 2.35% (Ti) and (Si) 0.40% ~ 1.00%, 0.020% or less (P), (S) of 0.015% or less.

Use the wire, cold heading standards (Ti) 1.75% ~ 2.35%, 0.40% ~ 1.00% (Si), (P) acuties were 0.025%, 0.020% or less (S).

5 hot rolled and forged bar standard (Cu) of 0.25% or less.

1.5), heat treatment system is the standard heat treatment system are shown in table 1-3; Alloy is 900 °C heat treatment system plus or minus 10 °C, 1 to 2 h, oil cooled to + 750 °C + 10 °C, 16 h, air cooling.

1.4980 Physical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | σ_b /MPa |
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta_{5\geq}$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

1.4980 Mechanical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | σ_b /MPa |
| Yield Strength | 154 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 56 | $\delta_{5\geq}$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 235-268 | - |
| HRC | 30 | - |

1.4980 Heat Treatment Regime

| | | | | |
|------------------|------------------|------------------|--------------------|------------------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
|------------------|------------------|------------------|--------------------|------------------|

| | | | | |
|---|---|---|---|---|
| √ | √ | √ | √ | √ |
|---|---|---|---|---|

| 1.4980 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 Superalloys the specifications follows: