

This page is mainly introduced the 00Cr19Ni10 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 00Cr19Ni10, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Steel 00Cr19Ni10

| 00Cr19Ni10 Standard Number: |                   |                                                              |
|-----------------------------|-------------------|--------------------------------------------------------------|
| ITEM                        | Standard Number   | Descriptions                                                 |
| 1                           | GB 13296 (2007)   | Seamless stainless steel tubes for boiler and heat exchanger |
| 2                           | GB/T 1220 (1992)  | Stainless steel bars                                         |
| 3                           | GB/T 12770 (2002) | Welded stainless steel tubes for machine structures          |
| 4                           | GB/T 12771 (2000) | Welded stainless steel pipes for liquid delivery             |
| 5                           | GB/T 14975 (2002) | Stainless steel seamless tubes for structures                |
| 6                           | GB/T 14976 (2002) | Stainless steel seamless tubes for fluid transport           |
| 7                           | GB/T 3090 (2000)  | Stainless steel small diameter seamless steel tubes          |
| 8                           | GB/T 3280 (2007)  | Cold rolled stainless steel sheets and plates                |
| 9                           | GB/T 4237 (1992)  | Hot rolled stainless steel sheets and plates                 |
| 10                          | GB/T 4239 (1991)  | Cold rolled stainless steel and heat resisting steel strips  |
| 11                          | GB/T 4356 (2002)  | Stainless steel wire rods                                    |
| 12                          | JB 4728 (2000)    | Stainless Steel Forgings for Pressure Vessels                |

| 00Cr19Ni10 Chemical composition (mass fraction) (wt.%) |    |    |   |          |    |    |          |   |    |
|--------------------------------------------------------|----|----|---|----------|----|----|----------|---|----|
| Chemical                                               |    |    |   | Min. (%) |    |    | Max. (%) |   |    |
| C                                                      |    |    |   |          |    |    | 0.030    |   |    |
| Si                                                     |    |    |   |          |    |    | 1.00     |   |    |
| Mn                                                     |    |    |   |          |    |    | 2.00     |   |    |
| P                                                      |    |    |   |          |    |    | 0.035    |   |    |
| S                                                      |    |    |   |          |    |    | 0.030    |   |    |
| Ni                                                     |    |    |   | 8.00     |    |    | 12.00    |   |    |
| Cr                                                     |    |    |   | 18.00    |    |    | 20.00    |   |    |
| C                                                      | Si | Mn | P | S        | Cr | Ni | Mo       | V | Ta |
|                                                        |    |    |   |          |    |    |          |   |    |

| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
|---|---|----|----|----|---|----|----|----|-------|
|   |   |    |    |    |   |    |    |    |       |

00Cr19Ni10 Stainless and heat resisting steels.

GB 13296 (2007) Seamless stainless steel tubes for boiler and heat exchanger

Austenitic steel; Allowable stress data source: GB 150.2:2011.

| 00Cr19Ni10 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      | -                        |

| 00Cr19Ni10 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      | -                        |

| 00Cr19Ni10 Heat Treatment Regime |           |           |             |       |
|----------------------------------|-----------|-----------|-------------|-------|
| Annealing                        | Quenching | Tempering | Normalizing | Q & T |
| √                                | √         | √         | √           | √     |

| 00Cr19Ni10 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:**