

This page is mainly introduced the 0Cr18Ni13Si4 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 0Cr18Ni13Si4, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 0Cr18Ni13Si4

### 0Cr18Ni13Si4 Standard Number:

| ITEM | Standard Number  | Descriptions                                                 |
|------|------------------|--------------------------------------------------------------|
| 1    | GB 13296 (2007)  | Seamless stainless steel tubes for boiler and heat exchanger |
| 2    | GB 4238 (1992)   | Heat-resisting steel sheets and plates                       |
| 3    | GB/T 1220 (1992) | Stainless steel bars                                         |
| 4    | GB/T 1221 (1992) | Heat-resisting steel bars                                    |
| 5    | GB/T 3280 (1992) | Cold rolled stainless steel sheets and plates                |
| 6    | GB/T 4237 (1992) | Hot rolled stainless steel sheets and plates                 |
| 7    | GB/T 4239 (1991) | Cold rolled stainless steel and heat resisting steel strips  |

### 0Cr18Ni13Si4 Chemical composition(mass fraction)(wt.%)

| Chemical |    |    |    | Min.(%) |    |    |    | Max.(%) |       |  |  |
|----------|----|----|----|---------|----|----|----|---------|-------|--|--|
| C        |    |    |    |         |    |    |    | 0.08    |       |  |  |
| Si       |    |    |    | 3.00    |    |    |    | 5.00    |       |  |  |
| Mn       |    |    |    |         |    |    |    | 2.00    |       |  |  |
| P        |    |    |    |         |    |    |    | 0.035   |       |  |  |
| S        |    |    |    |         |    |    |    | 0.030   |       |  |  |
| Ni       |    |    |    | 11.50   |    |    |    | 15.00   |       |  |  |
| Cr       |    |    |    | 15.00   |    |    |    | 20.00   |       |  |  |
| C        | Si | Mn | P  | S       | Cr | Ni | Mo | V       | Ta    |  |  |
|          |    |    |    |         |    |    |    |         |       |  |  |
| W        | N  | Cu | Co | Pb      | B  | Nb | Al | Ti      | Other |  |  |
|          |    |    |    |         |    |    |    |         |       |  |  |

0Cr18Ni13Si4

### 0Cr18Ni13Si4 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      | -                        |

### 0Cr18Ni13Si4 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      | -                        |

### 0Cr18Ni13Si4 Heat Treatment Regime

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

### 0Cr18Ni13Si4 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                |

