

**This page is mainly introduced the 3Cr13 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 3Cr13, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel 3Cr13

| 3Cr13 Standard Number: |                  |  |
|------------------------|------------------|--|
| ITEM                   | Standard Number  | Descriptions   |
| 1                      | GB 2270 (1980)   | Seamless tubes   |
| 2                      | GB/T 1220 (1992) | Stainless steel bars   |
| 3                      | GB/T 3280 (2007) | Cold rolled stainless steel sheets and plates                    |
| 4                      | GB/T 4226 (2004) | Cold finished stainless steel bars                               |
| 5                      | GB/T 4231 (1993) | Cold rolled stainless steel strips for springs                   |
| 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      |
| 8                      | GB/T 4240 (1993) | Stainless steel wires  |
| 9                      | GB/T 4356 (2002) | Stainless steel wire rods  |
| 10                     | JB/T 6398 (2006) | Heavy stainless acid resistant and heat resistant steel forgings |

| 3Cr13 Chemical composition (mass fraction) (wt.%) |    |         |    |    |    |         |    |    |       |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical  |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C   |    | 0.26    |    |    |    | 0.35    |    |    |       |
| Si  |    |         |    |    |    | 1.00    |    |    |       |
| Mn  |    |         |    |    |    | 1.00    |    |    |       |
| P   |    |         |    |    |    | 0.035   |    |    |       |
| S   |    |         |    |    |    | 0.030   |    |    |       |
| Ni  |    |         |    |    |    | 0.60    |    |    |       |
| Cr  |    | 12.00   |    |    |    | 14.00   |    |    |       |
| C   | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W   | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|   |    |         |    |    |    |         |    |    |       |

## 3Cr13

### 3Cr13 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      | -                        |

### 3Cr13 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      | -                        |

### 3Cr13 Heat Treatment Regime

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

### 3Cr13 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          | $\phi$ 8-1200mm*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:**