

This page is mainly introduced the 11Cr17 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 11Cr17, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 11Cr17

### 11Cr17 Standard Number:

| ITEM | Standard Number  | Descriptions                       |
|------|------------------|------------------------------------|
| 1    | GB/T 1220 (1992) | Stainless steel bars               |
| 2    | GB/T 4226 (2004) | Cold finished stainless steel bars |
| 3    | GB/T 4356 (2002) | Stainless steel wire rods          |

### 11Cr17 Chemical composition (mass fraction) (wt.%)

| Chemical |    | Min.(%) | Max.(%) |    |    |    |    |    |       |
|----------|----|---------|---------|----|----|----|----|----|-------|
| C        |    | 0.95    | 1.20    |    |    |    |    |    |       |
| Si       |    |         | 1.00    |    |    |    |    |    |       |
| Mn       |    |         | 1.00    |    |    |    |    |    |       |
| P        |    |         | 0.035   |    |    |    |    |    |       |
| S        |    |         | 0.030   |    |    |    |    |    |       |
| Ni       |    |         | 0.60    |    |    |    |    |    |       |
| Cr       |    | 16.00   | 18.00   |    |    |    |    |    |       |
| C        | Si | Mn      | P       | S  | Cr | Ni | Mo | V  | Ta    |
| W        | N  | Cu      | Co      | Pb | B  | Nb | Al | Ti | Other |

## 11Cr17

### 11Cr17 Physical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength   | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 65      | $\delta_{5\geq}$ (%)     |

|     |         |          |
|-----|---------|----------|
| ψ   | -       | ψ ≥ (%)  |
| Akv | -       | Akv ≥ /J |
| HBS | 123-321 | -        |
| HRC | 30      | -        |

### 11Cr17 Mechanical Properties

|                  |         |                         |
|------------------|---------|-------------------------|
| Tensile strength | 231-231 | σ <sub>b</sub> /MPa     |
| Yield Strength   | 154     | σ <sub>0.2</sub> ≥ /MPa |
| Elongation       | 56      | δ <sub>5</sub> ≥ (%)    |
| ψ                | -       | ψ ≥ (%)                 |
| Akv              | -       | Akv ≥ /J                |
| HBS              | 235-268 | -                       |
| HRC              | 30      | -                       |

### 11Cr17 Heat Treatment Regime

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

### 11Cr17 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:**