

**This page is mainly introduced the 2S.144 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 2S.144, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel 2S.144

### 2S.144 Standard Number:

| ITEM | Standard Number | Descriptions  |
|------|-----------------|---|
| 1    | BS S 144        | Specification for chromium-nickel-copper-molybdenum corrosion resisting steel (precipitation hardening) billets, bars, forgings and parts (1130-1330 MPa) |

### 2S.144 Chemical composition (mass fraction) (wt.%)

| Chemical |    | Min.(%) |    | Max.(%) |    |    |    |    |       |
|----------|----|---------|----|---------|----|----|----|----|-------|
| C        |    |         |    | 0.07    |    |    |    |    |       |
| Si       |    |         |    | 0.60    |    |    |    |    |       |
| Mn       |    |         |    | 1.00    |    |    |    |    |       |
| P        |    |         |    | 0.035   |    |    |    |    |       |
| S        |    |         |    | 0.025   |    |    |    |    |       |
| Cr       |    | 13.20   |    | 14.70   |    |    |    |    |       |
| Ni       |    | 5.00    |    | 5.80    |    |    |    |    |       |
| Mo       |    | 1.20    |    | 2.00    |    |    |    |    |       |
| Nb       |    | 0.10    |    | 0.40    |    |    |    |    |       |
| Cu       |    | 1.20    |    | 2.00    |    |    |    |    |       |
| C        | Si | Mn      | P  | S       | Cr | Ni | Mo | V  | Ta    |
| W        | N  | Cu      | Co | Pb      | B  | Nb | Al | Ti | Other |
|          |    |         |    |         |    |    |    |    |       |

Specification for chromium-nickel-copper-molybdenum corrosion resisting steel (precipitation hardening) billets, bars, forgings and parts (1130-1330 MPa)

### 2S.144 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      | -                        |

### 2S.144 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      | -                        |

### 2S.144 Heat Treatment Regime

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

| 2S.144 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:**