

This page is mainly introduced the S.125 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of S.125, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel S.125

| S.125 Standard Number: | | |
|------------------------|-----------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | BS S 125 | Specification for aircraft material. 23/14 chromium-nickel heat-resisting steel (titanium stabilized) (35 tonf/sq in: limiting ruling section 6 in) |

| S.125 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.15 | | | |
| Si | | 0.20 | | | | 1.00 | | | |
| Mn | | 0.50 | | | | 2.00 | | | |
| P | | | | | | 0.035 | | | |
| S | | | | | | 0.025 | | | |
| Cr | | 22.00 | | | | 25.00 | | | |
| Ni | | 13.00 | | | | 16.00 | | | |
| Mo | | | | | | | | | |
| Ti | | | | | | 4×C | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Specification for aircraft material. 23/14 chromium-nickel heat-resisting steel (titanium

stabilized) (35 tonf/sq in: limiting ruling section 6 in)

S.125 Physical Properties

| Tensile strength | 115-234 | σ_b /MPa |
|------------------|---------|--------------------------|
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | $Akv \geq$ /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

S.125 Mechanical Properties

| Tensile strength | 231-231 | σ_b /MPa |
|------------------|---------|--------------------------|
| Yield Strength | 154 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 56 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | $Akv \geq$ /J |
| HBS | 235-268 | - |
| HRC | 30 | - |

S.125 Heat Treatment Regime

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

| S.125 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: