

This page is mainly introduced the S.536 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of S.536, 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.536

| S.536 Standard Number: |                 |  |
|------------------------|-----------------|--|
| ITEM                   | Standard Number | Descriptions   |
| 1                      | BS S 536        | Specification for low carbon 18/10 chromium-nickel corrosion-resisting steel sheet and strip (500 MPa) |

| S.536 Chemical composition (mass fraction) (wt.%) |    |         |    |    |    |         |    |    |       |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical  |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C   |    |         |    |    |    | 0.030   |    |    |       |
| Si  |    | 0.20    |    |    |    | 1.00    |    |    |       |
| Mn  |    | 0.50    |    |    |    | 2.00    |    |    |       |
| P   |    |         |    |    |    | 0.035   |    |    |       |
| S   |    |         |    |    |    | 0.025   |    |    |       |
| Cr  |    | 17.50   |    |    |    | 19.00   |    |    |       |
| Ni  |    | 9.00    |    |    |    | 12.00   |    |    |       |
| Mo  |    |         |    |    |    |         |    |    |       |
| Nb/Ti   |    |         |    |    |    |         |    |    |       |
| C   | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W   | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|   |    |         |    |    |    |         |    |    |       |

Specification for low carbon 18/10 chromium-nickel corrosion-resisting steel sheet and strip (500

MPa)

### S.536 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      | -                        |

### S.536 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      | -                        |

### S.536 Heat Treatment Regime

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

| S.536 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:**