

This page is mainly introduced the 1.4406 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4406, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 1.4406

| 1.4406 Standard Number: |                  |                                                                                                                                                                                        |
|-------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM                    | Standard Number  | Descriptions                                                                                                                                                                           |
| 1                       | DIN EN 10088-1   | Stainless steels - Part 1: List of stainless steels                                                                                                                                    |
| 2                       | DIN EN 10088-2   | Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes                                                  |
| 3                       | DIN EN 10088-3   | Stainless steels - Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes |
| 4                       | DIN EN 10088-4   | Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes                                             |
| 5                       | DIN EN 10088-5   | Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes                    |
| 6                       | DIN 17440 (1975) | Stainless steels - Technical delivery conditions for drawn wire                                                                                                                        |
| 7                       | DIN 17441 (1997) | Stainless steels - Technical delivery conditions for cold rolled strips and slit coils strip and sheets cut from such strips for pressure purposes                                     |
| 8                       | DIN 17440 (1996) | Stainless steels - Technical delivery conditions for drawn wire                                                                                                                        |
| 9                       | DIN EN 10028-7   | Flat products made of steels for pressure purposes - Part 7: Stainless steels                                                                                                          |
| 10                      | DIN EN 10222-5   | Steel forgings for pressure purposes - Part 5: Martensitic, austenitic and austenitic-ferritic stainless steels                                                                        |
| 11                      | DIN EN 10250-4   | Open die steel forgings for general engineering purposes - Part 4: Stainless steels                                                                                                    |
| 12                      | DIN EN 10272     | Stainless steel bars for pressure purposes                                                                                                                                             |

| 1.4406 Chemical composition(mass fraction)(wt.%) |         |         |
|--------------------------------------------------|---------|---------|
| Chemical                                         | Min.(%) | Max.(%) |
| C                                                |         | 0.030   |
| Si                                               |         | 1.00    |
| Mn                                               |         | 2.00    |
| P                                                |         | 0.045   |
| S                                                |         | 0.030   |
| Cr                                               | 16.5    | 18.5    |

|    |    |    |    |      |    |    |      |    |       |
|----|----|----|----|------|----|----|------|----|-------|
| Mo |    |    |    | 2.00 |    |    | 2.50 |    |       |
| Ni |    |    |    | 10.0 |    |    | 12.0 |    |       |
| N  |    |    |    | 0.12 |    |    | 0.22 |    |       |
| C  | Si | Mn | P  | S    | Cr | Ni | Mo   | V  | Ta    |
|    |    |    |    |      |    |    |      |    |       |
| W  | N  | Cu | Co | Pb   | B  | Nb | Al   | Ti | Other |
|    |    |    |    |      |    |    |      |    |       |

DIN 1654-5 (1989) Cold heading and cold extruding steels; technical delivery conditions for stainless steels; Replaced by DIN EN 10263-5:2002

### 1.4406 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      | -                        |

### 1.4406 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      | -                        |

### 1.4406 Heat Treatment Regime

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

## 1.4406 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:**