

This page is mainly introduced the 1.4513 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4513, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 1.4513

### 1.4513 Standard Number:

| ITEM | Standard Number | Descriptions                                                                                                                               |
|------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | NF EN 10028-7   | Flat products made of steels for pressure purposes - Part 7: Stainless steels                                                              |
| 2    | NF EN 10088-1   | Stainless steels - Part 1: List of stainless steels                                                                                        |
| 3    | NF EN 10088-2   | Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes      |
| 4    | NF EN 10088-4   | Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes |

### 1.4513 Chemical composition(mass fraction)(wt.%)

| Chemical |    |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
|----------|----|----|---------|----|----|----|---------|----|----|-------|
| C        |    |    |         |    |    |    | 0.025   |    |    |       |
| Si       |    |    |         |    |    |    | 1.00    |    |    |       |
| Mn       |    |    |         |    |    |    | 1.00    |    |    |       |
| P        |    |    |         |    |    |    | 0.040   |    |    |       |
| S        |    |    |         |    |    |    | 0.015   |    |    |       |
| Cr       |    |    | 16.00   |    |    |    | 18.00   |    |    |       |
| Mo       |    |    | 1.00    |    |    |    | 1.50    |    |    |       |
| Ni       |    |    |         |    |    |    |         |    |    |       |
| Ti       |    |    | 0.30    |    |    |    | 0.60    |    |    |       |
| N        |    |    |         |    |    |    | 0.015   |    |    |       |
| C        | Si | Mn | P       | S  | Cr | Ni |         | Mo | V  | Ta    |
|          |    |    |         |    |    |    |         |    |    |       |
| W        | N  | Cu | Co      | Pb | B  | Nb |         | Al | Ti | Other |
|          |    |    |         |    |    |    |         |    |    |       |

## Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion

resisting steels for construction purposes

### 1.4513 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      | -                        |

### 1.4513 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      | -                        |

### 1.4513 Heat Treatment Regime

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

| 1.4513 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:**