

This page is mainly introduced the 1.0460 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.0460, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 1.0460

| 1.0460 Standard Number: |                 |                                                                                                     |
|-------------------------|-----------------|-----------------------------------------------------------------------------------------------------|
| ITEM                    | Standard Number | Descriptions                                                                                        |
| 1                       | EN 10273: 2007  | Hot rolled weldable steel bars for pressure purposes with specified elevated temperature properties |

| 1.0460 Chemical composition (mass fraction) (wt.%) |    |    |         |    |    |    |                   |    |       |
|----------------------------------------------------|----|----|---------|----|----|----|-------------------|----|-------|
| Chemical                                           |    |    | Min.(%) |    |    |    | Max.(%)           |    |       |
| C                                                  |    |    | 0.18    |    |    |    | 0.23              |    |       |
| Si                                                 |    |    |         |    |    |    | 0.4               |    |       |
| Mn                                                 |    |    | 0.3     |    |    |    | 0.9               |    |       |
| Ni                                                 |    |    |         |    |    |    | 0.3               |    |       |
| P                                                  |    |    |         |    |    |    | 0.025             |    |       |
| S                                                  |    |    |         |    |    |    | 0.015             |    |       |
| Cr                                                 |    |    |         |    |    |    | 0.3               |    |       |
| Ti                                                 |    |    |         |    |    |    | 0.03              |    |       |
| N                                                  |    |    | 0.03    |    |    |    | 0.07              |    |       |
| Nb                                                 |    |    |         |    |    |    | 0.010             |    |       |
| Al                                                 |    |    | 0.0015  |    |    |    | 0.05              |    |       |
| V                                                  |    |    |         |    |    |    | 0.02              |    |       |
| other                                              |    |    |         |    |    |    | Cr+Cu+Mo+Ni < 0.7 |    |       |
| C                                                  | Si | Mn | P       | S  | Cr | Ni | Mo                | V  | Ta    |
|                                                    |    |    |         |    |    |    |                   |    |       |
| W                                                  | N  | Cu | Co      | Pb | B  | Nb | Al                | Ti | Other |
|                                                    |    |    |         |    |    |    |                   |    |       |

1.0460



### 1.0460 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      | -                        |

### 1.0460 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      | -                        |

### 1.0460 Heat Treatment Regime

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

### 1.0460 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:**