

This page is mainly introduced the **STS434WSB Datasheet**, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS434WSB, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel STS434WSB

### STS434WSB Standard Number:

| ITEM | Standard Number | Descriptions  |
|------|-----------------|---|
| 1    | D 3697 (2002)   | Stainless steel wires for cold heading and cold forging |

### STS434WSB Chemical composition(mass fraction)(wt.%)

| Chemical |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
|----------|----|---------|----|----|----|---------|----|----|-------|
| C        |    |         |    |    |    | 0.12    |    |    |       |
| Si       |    |         |    |    |    | 1.00    |    |    |       |
| Mn       |    |         |    |    |    | 1.00    |    |    |       |
| P        |    |         |    |    |    | 0.040   |    |    |       |
| S        |    |         |    |    |    | 0.030   |    |    |       |
| Cr       |    | 16.00   |    |    |    | 18.00   |    |    |       |
| Ni       |    |         |    |    |    | 0.60    |    |    |       |
| Mo       |    | 0.75    |    |    |    | 1.25    |    |    |       |
| N        |    |         |    |    |    |         |    |    |       |
| C        | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W        | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|          |    |         |    |    |    |         |    |    |       |

Stainless steel wires for cold heading and cold forging

### STS434WSB 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      | -                        |

### STS434WSB 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      | -                        |

### STS434WSB Heat Treatment Regime

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

### STS434WSB 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, | $\Phi 8$ -1200mm*L | Forging, hot rolling and              | Black, Rough Turning,   |

|               |  |                            |                                   |   |
|---------------|--|----------------------------|-----------------------------------|---|
|               | Square Bar                               |                            | cold rolling, Cast                | 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:**