

**This page is mainly introduced the STS304J1 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS304J1, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel STS304J1

| STS304J1 Standard Number: |                 |  |
|---------------------------|-----------------|--|
| ITEM                      | Standard Number | Descriptions   |
| 1                         | D 3698 (2008)   | Cold rolled stainless steel plates, sheets and strip |
| 2                         | D 3705 (2008)   | Hot rolled stainless steel plates, sheets and strip  |

| STS304J1 Chemical composition (mass fraction) (wt.%) |    |         |    |    |    |         |    |    |       |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical   |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C  |    |         |    |    |    | 0.08    |    |    |       |
| Si   |    |         |    |    |    | 1.70    |    |    |       |
| Mn   |    |         |    |    |    | 3.00    |    |    |       |
| P  |    |         |    |    |    | 0.045   |    |    |       |
| S  |    |         |    |    |    | 0.030   |    |    |       |
| Cr   |    | 15.00   |    |    |    | 18.00   |    |    |       |
| Ni   |    | 6.00    |    |    |    | 9.00    |    |    |       |
| Mo   |    |         |    |    |    |         |    |    |       |
| N  |    |         |    |    |    |         |    |    |       |
| Cu   |    | 1.00    |    |    |    | 3.00    |    |    |       |
| C  | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W  | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|  |    |         |    |    |    |         |    |    |       |

Hot rolled stainless steel plates, sheets and strip

| STS304J1 Physical Properties |         |        |
|------------------------------|---------|--------|
| Tensile strength             | 115-234 | σb/MPa |

|                |         |                                  |
|----------------|---------|----------------------------------|
| Yield Strength | 23      | $\sigma_{0.2} \geq / \text{MPa}$ |
| Elongation     | 65      | $\delta 5 \geq (\%)$             |
| $\psi$         | -       | $\psi \geq (\%)$                 |
| Akv            | -       | $Akv \geq / \text{J}$            |
| HBS            | 123-321 | -                                |
| HRC            | 30      | -                                |

### STS304J1 Mechanical Properties

|                  |         |                                  |
|------------------|---------|----------------------------------|
| Tensile strength | 231-231 | $\sigma_b / \text{MPa}$          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq / \text{MPa}$ |
| Elongation       | 56      | $\delta 5 \geq (\%)$             |
| $\psi$           | -       | $\psi \geq (\%)$                 |
| Akv              | -       | $Akv \geq / \text{J}$            |
| HBS              | 235-268 | -                                |
| HRC              | 30      | -                                |

### STS304J1 Heat Treatment Regime

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

### STS304J1 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          | $\Phi 8$ -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:**