

This page is mainly introduced the STS444 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS444, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STS444

STS444 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 |

STS444 Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) | Max.(%) | | | | | | | |
|------------|--------------------|---------|----|----|----|----|----|----|-------|
| C | | 0.025 | | | | | | | |
| Si | | 1.00 | | | | | | | |
| Mn | | 1.00 | | | | | | | |
| P | | 0.040 | | | | | | | |
| S | | 0.030 | | | | | | | |
| Cr | 17.00 | 20.00 | | | | | | | |
| Ni | | 0.60 | | | | | | | |
| Mo | 1.75 | 2.50 | | | | | | | |
| N | | 0.025 | | | | | | | |
| Ti, Nb, Zr | $8 \times (C + N)$ | 0.80 | | | | | | | |
| 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

STS444 Physical Properties

| | | |
|------------------|---------|--------|
| Tensile strength | 115-234 | σb/MPa |
|------------------|---------|--------|

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

STS444 Mechanical Properties

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

STS444 Heat Treatment Regime

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

STS444 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: