

This page is mainly introduced the STS304N1 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS304N1, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STS304N1

STS304N1 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--|
| 1 | D 3535 (2002) | Stainless steel wires for springs |
| 2 | D 3698 (2008) | Cold rolled stainless steel plates, sheets and strip |
| 3 | D 3702 (2008) | Stainless steel wire rods |
| 4 | D 3703 (2007) | Stainless steel wires |
| 5 | D 3705 (2008) | Hot rolled stainless steel plates, sheets and strip |
| 6 | D 3706 (2008) | Stainless steel bars |

STS304N1 Chemical composition(mass fraction)(wt.%)

| Chemical | | Min.(%) | | Max.(%) | | | | | |
|----------|----|---------|----|---------|----|----|----|----|-------|
| C | | | | 0.08 | | | | | |
| Si | | | | 1.00 | | | | | |
| Mn | | | | 2.50 | | | | | |
| P | | | | 0.045 | | | | | |
| S | | | | 0.030 | | | | | |
| Cr | | 18.00 | | 20.00 | | | | | |
| Ni | | 7.00 | | 10.50 | | | | | |
| Mo | | | | | | | | | |
| N | | 0.10 | | 0.25 | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless steel bars

STS304N1 Physical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | σ_b /MPa |
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

STS304N1 Mechanical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | σ_b /MPa |
| Yield Strength | 154 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 56 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 235-268 | - |
| HRC | 30 | - |

STS304N1 Heat Treatment Regime

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

STS304N1 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 |

