

This page is mainly introduced the STS303 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS303, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STS303

| STS303 Standard Number: | | |
|-------------------------|-----------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | D 3692 (2001) | Cold finished stainless steel bars |
| 2 | D 3702 (2008) | Stainless steel wire rods |
| 3 | D 3703 (2007) | Stainless steel wires |
| 4 | D 3705 (2008) | Hot rolled stainless steel plates, sheets and strip |
| 5 | D 3706 (2008) | Stainless steel bars |
| 6 | D 7202 (2004) | Free - machining stainless steel wire and wire rods |

| STS303 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.15 | | | |
| Si | | | | | | 1.00 | | | |
| Mn | | | | | | 2.00 | | | |
| P | | | | | | 0.20 | | | |
| S | | | | | | 0.15 | | | |
| Cr | | 17.00 | | | | 19.00 | | | |
| Ni | | 8.00 | | | | 10.00 | | | |
| Mo | | | | | | 0.60 | | | |
| N | | | | | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Free - machining stainless steel wire and wire rods

| STS303 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 | - |

| STS303 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 | - |

| STS303 Heat Treatment Regime | | | | |
|------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| STS303 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, | Φ8-1200mm*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: