

This page is mainly introduced the STS420F Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS420F, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STS420F

| STS420F 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 3706 (2008) | Stainless steel bars |

| STS420F Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|---|----|---------|----|----|---------|----|----|----|-------|
| Chemical | | Min.(%) | | | Max.(%) | | | | |
| C | | 0.26 | | | 0.40 | | | | |
| Si | | | | | 1.00 | | | | |
| Mn | | | | | 1.00 | | | | |
| P | | | | | 0.060 | | | | |
| S | | | | | 0.15 | | | | |
| Cr | | 12.00 | | | 14.00 | | | | |
| Ni | | | | | 0.60 | | | | |
| Mo | | | | | 0.60 | | | | |
| N | | | | | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless steel bars

| STS420F 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 | - |

| STS420F 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 | - |

| STS420F Heat Treatment Regime | | | | |
|-------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| STS420F 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: