

This page is mainly introduced the X8CrNiS18 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X8CrNiS18, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X8CrNiS18

| X8CrNiS18 Standard Number: | | |
|----------------------------|-----------------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | DIN 17440 (2001) | Stainless steels - Technical delivery conditions for drawn wire |
| 2 | DIN 17440 (1972) | Stainless steels - Technical delivery conditions for drawn wire |
| 3 | DIN 17440 (1985) | Stainless steels - Technical delivery conditions for drawn wire |
| 4 | DIN EN 10088-1 | Stainless steels - Part 1: List of stainless steels |
| 5 | DIN EN 10088-2 | Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes |
| 6 | DIN EN 10088-3 | Stainless steels - Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes |
| 7 | DIN EN 10088-5 | Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes |
| 8 | DIN EN 10297-2 (2005) | Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel |

| X8CrNiS18 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|---|----|---------|---|---|---------|----|----|---|----|
| Chemical | | Min.(%) | | | Max.(%) | | | | |
| C | | | | | 0.10 | | | | |
| Si | | | | | 1.00 | | | | |
| Mn | | | | | 2.00 | | | | |
| P | | | | | 0.045 | | | | |
| S | | 0.15 | | | 0.35 | | | | |
| Cr | | 17.0 | | | 19.0 | | | | |
| Ni | | 8.00 | | | 10.0 | | | | |
| N | | | | | 0.11 | | | | |
| Cu | | | | | 0.11 | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |

| | | | | | | | | | |
|---|---|----|----|----|---|----|----|----|-------|
| | | | | | | | | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless steels - Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes

| X8CrNiS18 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 | - |

| X8CrNiS18 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 | - |

| X8CrNiS18 Heat Treatment Regime | | | | |
|---------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| X8CrNiS18 Range of products | | | | |
|-----------------------------|-----------------|-------------------|--------------------------|------------------------|
| Product type | Products | Dimension | Processes | Deliver Status |
| Plates / Sheets | Plates / Sheets | 0.08-200mm(T)*W*L | Forging, hot rolling and | Annealed, Solution and |

| | | | | |
|---------------|--|----------------------------|---|---|
| | | | cold rolling | 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 |

We can produce Specialsteel the specifications follows: