

This page is mainly introduced the X1CrNiSi18-15-4 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X1CrNiSi18-15-4, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X1CrNiSi18-15-4

X1CrNiSi18-15-4 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | DIN EN 10088-1 | Stainless steels - Part 1: List of stainless steels |
| 2 | DIN EN 10088-2 | Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes |
| 3 | 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 |

X1CrNiSi18-15-4 Chemical composition(mass fraction)(wt.%)

| Chemical | | Min.(%) | | | | | Max.(%) | | | |
|----------|----|---------|----|----|----|----|---------|----|-------|--|
| C | | | | | | | 0.015 | | | |
| Si | | 3.70 | | | | | 4.50 | | | |
| Mn | | | | | | | 2.00 | | | |
| P | | | | | | | 0.025 | | | |
| S | | | | | | | 0.010 | | | |
| Cr | | 16.5 | | | | | 18.5 | | | |
| Mo | | | | | | | 0.20 | | | |
| Ni | | 14.0 | | | | | 16.0 | | | |
| N | | | | | | | 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

| X1CrNiSi18-15-4 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 | - |

| X1CrNiSi18-15-4 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 | - |

| X1CrNiSi18-15-4 Heat Treatment Regime | | | | |
|---------------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| X1CrNiSi18-15-4 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 | ϕ 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: