

**This page is mainly introduced the X2CrNi23-4 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X2CrNi23-4, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel X2CrNi23-4

| X2CrNi23-4 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 |
| 4                           | DIN EN 10088-4        | Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes   |
| 5                           | DIN EN 10028-7        | Flat products made of steels for pressure purposes - Part 7: Stainless steels  |
| 6                           | 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                    |
| 7                           | DIN EN 10216-5 (2004) | Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes   |
| 8                           | DIN EN 10217-7        | Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes   |
| 9                           | DIN EN 10250-4        | Open die steel forgings for general engineering purposes - Part 4: Stainless steels  |
| 10                          | DIN EN 10253-3        | Butt-welding pipe fittings - Part 3: Wrought austenitic and austenitic-ferritic (duplex) stainless steels without specific inspection requirements                                     |
| 11                          | DIN EN 10253-4        | Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements  |
| 12                          | DIN EN 10272          | Stainless steel bars for pressure purposes   |

| X2CrNi23-4 Chemical composition(mass fraction)(wt.%) |         |         |
|--|---------|---------|
| Chemical   | Min.(%) | Max.(%) |
| C  |         | 0.030   |
| Si   |         | 1.00    |
| Mn   |         | 2.50    |
| P  |         | 0.035   |

|    |    |    |      |    |    |       |    |    |       |
|----|----|----|------|----|----|-------|----|----|-------|
| S  |    |    |      |    |    | 0.015 |    |    |       |
| Cr |    |    | 22.0 |    |    | 24.0  |    |    |       |
| Mo |    |    | 0.10 |    |    | 0.60  |    |    |       |
| Ni |    |    | 3.00 |    |    | 5.50  |    |    |       |
| N  |    |    | 0.05 |    |    | 0.20  |    |    |       |
| Cu |    |    | 0.10 |    |    | 0.60  |    |    |       |
| 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

### X2CrNiN23-4 Physical Properties

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

### X2CrNiN23-4 Mechanical Properties

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

### X2CrNiN23-4 Heat Treatment Regime

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

| X2CrNi23-4 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          | 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:**