

This page is mainly introduced the X2CrNiMoN17-13-3 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X2CrNiMoN17-13-3, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel X2CrNiMoN17-13-3

| X2CrNiMoN17-13-3 Standard Number: |                      |  |  |  |  |
|-----------------------------------|----------------------|--|--|--|--|
| ITEM                              | Standard Number      | Descriptions   |  |  |  |
| 1                                 | BS EN 10028-7        | Flat products made of steels for pressure purposes - Part 7: Stainless steels  |  |  |  |
| 2                                 | BS EN 10088-1        | Stainless steels - Part 1: List of stainless steels  |  |  |  |
| 3                                 | BS EN 10088-2        | Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes  |  |  |  |
| 4                                 | BS EN 10088-3        | Stainless steels - Part 3: Technical delivery conditions for semi-finished products,<br>bars, rods, wire, sections and bright products of corrosion resisting steels for<br>general purposes |  |  |  |
| 5                                 | BS EN 10088-4        | Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes   |  |  |  |
| 6                                 | BS EN 10088-5        | stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections<br>and bright products of corrosion resisting steels for construction purposes                       |  |  |  |
| 7                                 | BS EN 10216-5 (2004) | Seamless steel tubes for pressure purposes - Technical delivery conditions - Part<br>5: Stainless steel tubes  |  |  |  |
| 8                                 | BS EN 10217-7        | Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7:<br>Stainless steel tubes  |  |  |  |
| 9                                 | BS EN 10222-5        | Steel forgings for pressure purposes - Part 5: Martensitic, austenitic and austenitic-<br>ferritic stainless steels  |  |  |  |
| 10                                | BS EN 10250-4        | Open die steel forgings for general engineering purposes - Part 4: Stainless steels  |  |  |  |
| 11                                | BS EN 10253-3        | Butt-welding pipe fittings - Part 3: Wrought austenitic and austenitic-ferritic (duplex) stainless steels without specific inspection requirements   |  |  |  |
| 12                                | BS EN 10253-4        | Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements  |  |  |  |
| 13                                | BS EN 10263-5        | Steel rod, bars and steel wire for cold heading and cold extrusion - Part 5:<br>Technical delivery conditions for stainless steels   |  |  |  |
| 14                                | BS EN 10269          | Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties   |  |  |  |
| 15                                | BS EN 10272          | Stainless steel bars for pressure purposes   |  |  |  |
| 16                                | BS EN 10296-2 (2005) | Welded circular steel tubes for mechanical and general engineering purposes -<br>Technical delivery conditions - Part 2: Stainless steel   |  |  |  |
| 17                                | BS EN 10297-2 (2005) | Seamless circular steel tubes for mechanical and general engineering purposes -<br>Technical delivery conditions - Part 2: Stainless steel   |  |  |  |



| X2CrNiMoN17-13-3 Chemical composition(mass fraction)(wt.%) |    |    |    |         |    |      |         |       |       |
|--|----|----|----|---------|----|------|---------|-------|-------|
| Chemical   |    |    |    | Min.(%) |    |      | Max.(%) |       |       |
|  | С  |    |    |         |    | 0.03 |         |       |       |
|  | Si |    |    |         |    |      | 1.00    |       |       |
|  | Mn |    |    |         |    |      |         | 2.00  |       |
| Р  |    |    |    |         |    |      |         | 0.045 |       |
|  | S  |    |    |         |    |      | 0.015   |       |       |
|  | Cr |    |    | 16.50   |    |      | 18.50   |       |       |
| Ni   |    |    |    | 11.00   |    |      | 14.00   |       |       |
|  | Мо |    |    | 2.50    |    |      | 3.00    |       |       |
|  | N  |    |    | 0.12    |    |      | 0.22    |       |       |
| С  | Si | Mn | Р  | S       | Cr | Ni   | Мо      | V     | Та    |
|  |    |    |    |         |    |      |         |       |       |
| W  | N  | Cu | Co | Pb      | В  | Nb   | Al      | Ti    | Other |
|  |    |    |    |         |    |      |         |       |       |

Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

| X2CrNiMoN17-13-3 Physical Properties |         |             |  |  |  |
|--------------------------------------|---------|-------------|--|--|--|
| Tensile strength                     | 115-234 | σb/MPa      |  |  |  |
| Yield Strength                       | 23      | σ 0.2 ≥/MPa |  |  |  |
| Elongation                           | 65      | δ5≥ (%)     |  |  |  |
| ψ                                    | -       | ψ≥ (%)      |  |  |  |
| Akv                                  | -       | Akv≥/J      |  |  |  |
| HBS                                  | 123-321 | -           |  |  |  |
| HRC                                  | 30      | -           |  |  |  |

| X2CrNiMoN17-13-3 Mechanical Properties |     |             |  |  |  |  |
|--|-----|-------------|--|--|--|--|
| Tensile strength 231-231 σb/MPa        |     |             |  |  |  |  |
| Yield Strength                         | 154 | σ 0.2 ≥/MPa |  |  |  |  |
| Elongation                             | 56  | δ5≥(%)      |  |  |  |  |
| Ψ                                      | -   | ψ≥(%)       |  |  |  |  |



| Akv | -       | Akv≥/J |
|-----|---------|--------|
| HBS | 235-268 | -      |
| HRC | 30      | -      |

| X2CrNiMoN17-13-3 Heat Treatment Regime |   |              |              |              |  |  |  |
|--|---|--------------|--------------|--------------|--|--|--|
| Annealing                              | Annealing Quenching Tempering Normalizing Q & T |              |              |              |  |  |  |
| $\checkmark$                           | $\checkmark$                                    | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  |  |

| X2CrNiMoN17-13-3 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<br>Aging, Q+T, ACID-<br>WASHED, Shot Blasting |  |  |  |
| Steel Bar                          | Round Bar, Flat Bar,<br>Square Bar          | Φ8-1200mm*L                   | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning,<br>Shot Blasting,                              |  |  |  |
| Coil / Strip                       | Steel Coil /Steel Strip                     | 0.03-16.0x1200mm              | Cold-Rolled & Hot-<br>Rolled                | Annealed, Solution and<br>Aging, Q+T, ACID-<br>WASHED, Shot Blasting |  |  |  |
| Pipes / Tubes                      | Seamless Pipes/Tubes,<br>Welded Pipes/Tubes | OD:6-219mm x<br>WT:0.5-20.0mm | Hot extrusion, Cold<br>Drawn, Welded        | Annealed, Solution and<br>Aging, Q+T, ACID-<br>WASHED                |  |  |  |

## We can produce Specialsteel the specifications follows: