

This page is mainly introduced the X6Cr13 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X6Cr13, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## **Datasheet for Steel Grades Specialsteel X6Cr13**

| X6Cr13 Standard Number: |                  |                                                                                                                                                                                              |  |  |  |
|-------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| ITEM                    | Standard Number  | Descriptions                                                                                                                                                                                 |  |  |  |
| 1                       | DIN 17440 (1996) | Stainless steels - Technical delivery conditions for drawn wire                                                                                                                              |  |  |  |
| 2                       | DIN 17440 (2001) | Stainless steels - Technical delivery conditions for drawn wire                                                                                                                              |  |  |  |
| 3                       | DIN 17441 (1985) | Stainless steels - Technical delivery conditions for cold rolled strips and slit coils strip and sheets cut from such strips for pressure purposes                                           |  |  |  |
| 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,<br>bars, rods, wire, sections and bright products of corrosion resisting steels for<br>general purposes |  |  |  |

|   | X6Cı     | 13 Che | emical c | compos  | ition(ma | ass fra | action)(w | t.%) |       |
|---|----------|--------|----------|---------|----------|---------|-----------|------|-------|
|   | Chemical |        |          | Min.(%) |          |         | Max.(%)   |      |       |
|   | С        |        |          |         |          |         | 0.08      |      |       |
|   | Si       |        |          |         |          | 1.00    |           |      |       |
|   | Mn       |        |          |         |          |         |           | 1.00 |       |
|   | Р        |        |          |         |          |         | 0.040     |      |       |
|   | S        |        |          |         |          |         | 0.015     |      |       |
|   | Cr       |        |          | 12.0    |          |         | 14.0      |      |       |
| С | Si       | Mn     | Р        | S       | Cr       | Ni      | Мо        | V    | Та    |
|   |          |        |          |         |          |         |           |      |       |
| W | N        | Cu     | Co       | Pb      | В        | Nb      | Al        | Ti   | Other |
|   |          |        |          |         |          |         |           |      |       |

Stainless steels - Technical delivery conditions for drawn wire

## Steel GradesX6Cr13 Chemical information, Mechanical properties

Physical properties, Mechanical properties, Heat treatment, and Micro structure

| X6Cr13 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      | -           |  |  |  |

| X6Cr13 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      | -           |  |  |  |

| X6Cr13 Heat Treatment Regime |   |           |             |       |  |
|------------------------------|---|-----------|-------------|-------|--|
| Annealing Quenching          |   | Tempering | Normalizing | Q & T |  |
| √                            | √ | √         | √           | √     |  |

| X6Cr13 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: