

This page is mainly introduced the X12CrNiWTi16-13 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X12CrNiWTi16-13, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Steel X12CrNiWTi16-13

### X12CrNiWTi16-13 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--------------|
|------|-----------------|--------------|

### X12CrNiWTi16-13 Chemical composition (mass fraction) (wt.%)

| Chemical |          |          | Min.(%)   |           |           |           | Max.(%) |           |       |  |
|----------|----------|----------|-----------|-----------|-----------|-----------|---------|-----------|-------|--|
| C        | Si       | Mn       | P         | S         | Cr        | Ni        | Mo      | V         | Ta    |  |
| Max 0.15 | Max 0.50 | Max 1.00 | Max 0.045 | Max 0.030 | 15.0-17.0 | 12.5-14.5 |         |           |       |  |
| W        | N        | Cu       | Co        | Pb        | B         | Nb        | Al      | Ti        | Other |  |
|          |          |          |           |           |           |           |         | 0.40-0.60 |       |  |

### X12CrNiWTi16-13

### X12CrNiWTi16-13 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      | -                        |

### X12CrNiWTi16-13 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      | -                    |

### X12CrNiWTi16-13 Heat Treatment Regime

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

### X12CrNiWTi16-13 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 Special Steel the specifications follows:**