

This page is mainly introduced the 1Cr12Mo Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1Cr12Mo, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 1Cr12Mo

1Cr12Mo Standard Number:

| ITEM | Standard Number | Descriptions |
|------|------------------|-----------------------------------|
| 1 | GB/T 1221 (1992) | Heat-resisting steel bars |
| 2 | GB/T 8732 (2004) | Steels of blade for steam turbine |

1Cr12Mo Chemical composition (mass fraction) (wt.%)

| Chemical | | Min.(%) | | Max.(%) | | | | | |
|----------|----|---------|----|---------|----|----|----|----|-------|
| C | | 0.10 | | 0.15 | | | | | |
| Si | | | | 0.50 | | | | | |
| Mn | | 0.30 | | 0.50 | | | | | |
| P | | | | 0.035 | | | | | |
| S | | | | 0.300 | | | | | |
| Ni | | 0.30 | | 0.60 | | | | | |
| Cr | | 11.50 | | 13.00 | | | | | |
| Mo | | 0.30 | | 0.60 | | | | | |
| Cu | | | | 0.30 | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |

1Cr12Mo

1Cr12Mo 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 | - |

| 1Cr12Mo 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 | - |

| 1Cr12Mo Heat Treatment Regime | | | | |
|-------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| 1Cr12Mo 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 | $\Phi 8$ -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: