

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

Datasheet for Steel Grades Tool Steel And Hard Alloy 4XMHΦC

4XXXXC Standard Number:

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

4XXXXC Chemical composition (mass fraction) (wt.%)

| Chemical | | | Min.(%) | | | | Max.(%) | | |
|-----------|-----------|-----------|---------|--------|-----------|-----------|-----------|-----------|-------------------------------|
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| 0.35-0.42 | 0.70-1.00 | 0.15-0.40 | ≤0.003 | ≤0.003 | 1.25-1.55 | 1.20-1.60 | 0.65-0.85 | 0.35-0.50 | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| ≤0.20 | | ≤0.30 | | | | | | ≤0.03 | Zr:0.03-0.09 B:0.002-0.004 |

4XXXXC 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 | - |

4XXXXC Mechanical Properties

| | | |
|------------------|---------|--------|
| Tensile strength | 231-231 | σb/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 | - |

420C Heat Treatment Regime

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

420C 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 Tool Steel And Hard Alloy the specifications follows: