

This page is mainly introduced the W6Mo5Cr4V2Co5 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of W6Mo5Cr4V2Co5, 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 W6Mo5Cr4V2Co5

W6Mo5Cr4V2Co5 Standard Number:

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

### W6Mo5Cr4V2Co5 Chemical composition (mass fraction) (wt.%)

| Chemical  |           |           |                 | Min.(%) |           |    | Max.(%)   |           |       |
|-----------|-----------|-----------|-----------------|---------|-----------|----|-----------|-----------|-------|
| C         | Si        | Mn        | P               | S       | Cr        | Ni | Mo        | V         | Ta    |
| 0.80~0.90 | 0.20~0.45 | 0.15~0.40 | ≤0.030          | ≤0.030  | 3.75~4.50 |    | 4.50~5.50 | 1.75~2.25 |       |
| W         | N         | Cu        | Co              | Pb      | B         | Nb | Al        | Ti        | Other |
| 5.50~6.50 |           |           | Co<br>4.50~5.50 |         |           |    |           |           |       |

### The performance characteristics of high-speed tool steel with purpose

- (1) use of steel DianZhaLu smelting, the silicon content not specified limit.
- (2) in order to improve steel cutting machining, the buyer's request, can be provisions for sulfur  $\omega$  (S) 0.60% ~ 0.15%.
- (3) of residual elements in steel (mass fraction) : 0.30% or Ni; Cu 0.25% or less.
- (4) is the high tungsten molybdenum content allowed  $\omega$  (Mo) more than 1.00%. Steel tungsten molybdenum and the relationship is: when molybdenum content more than  $\omega$  (Mo) 0.30%, tungsten content reduced correspondingly, in molybdenum content more than  $\omega$  (Mo) 0.30% of the part, each  $\omega$  (Mo) 1% can replace  $\omega$  (W) 2%, if meet this

kind of case, in this GangHao add after "Mo".

(5) [W6Mo5Cr4V2](#) steel according to both the supply and the demand agreement, adjust the content of vanadium  $\omega$  (V) 1.60% ~ 2.20%.

### W6Mo5Cr4V2Co5 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      | -                        |

### W6Mo5Cr4V2Co5 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      | -                        |

### W6Mo5Cr4V2Co5 Heat Treatment Regime

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

### W6Mo5Cr4V2Co5 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,<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 Tool Steel And Hard Alloy the specifications follows:**