

This page is mainly introduced the 60WCrV7 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 60WCrV7, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Data Table for Grades Tool Die Steels 60WCrV7

| 60WCrV7 Standard Number: |                  |                                               |
|--------------------------|------------------|-----------------------------------------------|
| ITEM                     | Standard Number  | Descriptions                                  |
| 1                        | DIN 17350 (1980) | Tool Steels; Technical Conditions of Delivery |

| 60WCrV7 Chemical composition(mass fraction)(wt.%) |         |         |
|---------------------------------------------------|---------|---------|
| Chemical                                          | Min.(%) | Max.(%) |
| C                                                 | 0.55    | 0.65    |
| Si                                                | 0.50    | 0.70    |
| Mn                                                | 0.15    | 0.45    |
| P                                                 |         | 0.030   |
| S                                                 |         | 0.030   |
| Cr                                                | 0.90    | 1.20    |
| Mo                                                |         |         |
| V                                                 | 0.10    | 0.20    |
| W                                                 | 1.80    | 2.10    |

| 60WCrV7 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      | -                        |

| 60WCrV7 Mechanical Properties |         |                          |
|-------------------------------|---------|--------------------------|
| Tensile strength              | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength                | 154     | $\sigma_{0.2} \geq$ /MPa |

|            |         |        |
|------------|---------|--------|
| Elongation | 56      | δ5≥(%) |
| ψ          | -       | ψ≥(%)  |
| Akv        | -       | Akv≥/J |
| HBS        | 235-268 | -      |
| HRC        | 30      | -      |

### 60WCrV7 Heat Treatment Regime

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

### 60WCrV7 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 Die Steels the specifications follows:**