

This page is mainly introduced the 40Cr10 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 40Cr10, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Structure Steel 40Cr10

### 40Cr10 Standard Number:

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

### 40Cr10 Chemical composition (mass fraction) (wt.%)

| Chemical  |           |            | Min.(%) |       |            |      | Max.(%) |    |       |
|-----------|-----------|------------|---------|-------|------------|------|---------|----|-------|
| C         | Si        | Mn         | P       | S     | Cr         | Ni   | Mo      | V  | Ta    |
| 0.36-0.44 | 0.17-0.37 | 0.50- 0.80 | 0.035   | 0.035 | 0.80- 1.10 | 0.30 |         |    |       |
| W         | N         | Cu         | Co      | Pb    | B          | Nb   | Al      | Ti | Other |
|           |           | 0.3        |         |       |            |      |         |    |       |

### 40Cr10

### 40Cr10 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      | -                        |

### 40Cr10 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      | -                    |

### 40Cr10 Heat Treatment Regime

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

### 40Cr10 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 Structure Steel the specifications follows:**