

This page is mainly introduced the 9SiCr Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 9SiCr, 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 9SiCr

### 9SiCr Standard Number:

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

### 9SiCr Chemical composition(mass fraction)(wt.%)

| Chemical  |           |           | Min.(%) |        |           |       | Max.(%) |       |       |
|-----------|-----------|-----------|---------|--------|-----------|-------|---------|-------|-------|
| C         | Si        | Mn        | P       | S      | Cr        | Ni    | Mo      | V     | Ta    |
| 0.85~0.95 | 1.20~1.60 | 0.30~0.60 | ≤0.030  | ≤0.030 | 0.95~1.25 | ≤0.20 |         | ≤0.20 |       |
| W         | N         | Cu        | Co      | Pb     | B         | Nb    | Al      | Ti    | Other |
|           |           | ≤0.30     |         |        |           |       |         |       |       |

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### 9SiCr Physical Properties

|                  |         |             |
|------------------|---------|-------------|
| Tensile strength | 115-234 | σb/MPa      |
| Yield Strength   | 23      | σ 0.2 ≥/MPa |
| Elongation       | 65      | δ5 ≥ (%)    |

|        |         |                  |
|--------|---------|------------------|
| $\psi$ | -       | $\psi \geq (\%)$ |
| Akv    | -       | $Akv \geq /J$    |
| HBS    | 123-321 | -                |
| HRC    | 30      | -                |

### 9SiCr 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      | -                         |

### 9SiCr Heat Treatment Regime

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

### 9SiCr 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 Tool Steel And Hard Alloy the specifications follows:**