

This page is mainly introduced the 1.2833 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.2833, 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 1.2833

### 1.2833 Standard Number:

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

### 1.2833 Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) | Max.(%) |
|----------|---------|---------|
| C        | 0.95    | 1.05    |
| Si       | 0.15    | 0.25    |
| Mn       | 0.15    | 0.30    |
| P        |         | 0.025   |
| S        |         | 0.025   |
| Cr       |         |         |
| Mo       |         |         |
| V        | 0.10    | 0.15    |

### 1.2833 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      | -                        |

### 1.2833 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≥/J |
| HBS | 235-268 | -      |
| HRC | 30      | -      |

| 1.2833 Heat Treatment Regime |           |           |             |       |
|------------------------------|-----------|-----------|-------------|-------|
| Annealing                    | Quenching | Tempering | Normalizing | Q & T |
| √                            | √         | √         | √           | √     |

| 1.2833 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:**