

This page is mainly introduced the AISI 650 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of AISI 650, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Steel AISI 650

### AISI 650 Standard Number:

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

### AISI 650 Chemical composition (mass fraction) (wt.%)

| Chemical |    |          | Min.(%) |    |    |    | Max.(%) |    |       |
|----------|----|----------|---------|----|----|----|---------|----|-------|
| C        | Si | Mn       | P       | S  | Cr | Ni | Mo      | V  | Ta    |
| Max 0.05 |    | Max 1.75 |         |    | 16 | 25 | 6       |    |       |
| W        | N  | Cu       | Co      | Pb | B  | Nb | Al      | Ti | Other |
|          |    |          |         |    |    |    |         |    |       |

### AISI 650

### AISI 650 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      | -                        |

### AISI 650 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      | -                |

### AISI 650 Heat Treatment Regime

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

### AISI 650 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 Special Steel the specifications follows:**