

This page is mainly introduced the P460Q Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of P460Q, 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 P460Q

### P460Q Standard Number:

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

### P460Q Chemical composition (mass fraction) (wt.%)

| Chemical |     |     | Min.(%) |       |     |    | Max.(%) |    |       |
|----------|-----|-----|---------|-------|-----|----|---------|----|-------|
| C        | Si  | Mn  | P       | S     | Cr  | Ni | Mo      | V  | Ta    |
| 0.18     | 0.5 | 1.7 | 0.025   | 0.025 | 0.5 | 1  | 0.5     |    |       |
| W        | N   | Cu  | Co      | Pb    | B   | Nb | Al      | Ti | Other |
|          |     |     |         |       |     |    |         |    |       |

### P460Q

### P460Q 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      | -                        |

### P460Q 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      | -                |

| P460Q Heat Treatment Regime |           |           |             |       |
|-----------------------------|-----------|-----------|-------------|-------|
| Annealing                   | Quenching | Tempering | Normalizing | Q & T |
| √                           | √         | √         | √           | √     |

| P460Q 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:**