

This page is mainly introduced the ASTM C1Q Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ASTM C1Q, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Alloy ASTM C1Q

### ASTM C1Q Standard Number:

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

### ASTM C1Q Chemical composition (mass fraction) (wt.%)

| Chemical |          |          |           | Min.(%)   |      |           | Max.(%)   |      |       |
|----------|----------|----------|-----------|-----------|------|-----------|-----------|------|-------|
| C        | Si       | Mn       | P         | S         | Cr   | Ni        | Mo        | V    | Ta    |
| Max 0.25 | Max 0.60 | Max 1.20 | Max 0.025 | Max 0.025 | 0.40 | 1.50-2.00 | 0.15-0.30 | 0.03 |       |
| W        | N        | Cu       | Co        | Pb        | B    | Nb        | Al        | Ti   | Other |
|          |          | 0.50     |           |           |      |           |           |      |       |

### ASTM C1Q

### ASTM C1Q 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      | -                        |

### ASTM C1Q 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      | -                    |

### ASTM C1Q Heat Treatment Regime

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

### ASTM C1Q 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 Alloy the specifications follows:**