

This page is mainly introduced the CK3MCuN Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of CK3MCuN, 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 CK3MCuN

### CK3MCuN Standard Number:

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

### CK3MCuN Chemical composition (mass fraction) (wt.%)

| Chemical |           |           | Min.(%) |      |           |           | Max.(%) |    |       |
|----------|-----------|-----------|---------|------|-----------|-----------|---------|----|-------|
| C        | Si        | Mn        | P       | S    | Cr        | Ni        | Mo      | V  | Ta    |
| 0.025    | 1         | 1.2       | 0.045   | 0.01 | 19.5-20.5 | 17.5-19.5 | 6.0-7.0 |    |       |
| W        | N         | Cu        | Co      | Pb   | B         | Nb        | Al      | Ti | Other |
|          | 0.18-0.24 | 0.50-1.00 |         |      |           |           |         |    |       |

### CK3MCuN

### CK3MCuN 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      | -                        |

### CK3MCuN 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      | -                    |

### CK3MCuN Heat Treatment Regime

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

### CK3MCuN 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:**