

## Material: UNI CW611N

### Standard Specification for Copper and Copper Alloy Rod for Free Machining Purpose

**Group:** Non Ferrous Copper Alloys

**Sub Group:** UNI CW611N Copper and Copper Alloy Rod for Free Machining Purpose

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Rod

| Chemical Composition |      |                 | Heat Treatment                  |           |
|----------------------|------|-----------------|---------------------------------|-----------|
| Aluminium            | Al % | 0.050 max.      | As Raw or Solution Heat Treated |           |
| Iron                 | Fe % | 0.300 max.      |                                 |           |
| Nickel               | Ni % | 0.300 max.      |                                 |           |
| Lead                 | Pb % | 0.800 - 1.600   |                                 |           |
| Tin                  | Sn % | 0.300 max.      |                                 |           |
| Other                | Ot % | 0.200 max.      |                                 |           |
| Copper               | Cu % | 59.000 - 60.000 |                                 |           |
| Zinc                 | Zn % | Balance         |                                 |           |
| -                    | -    | -               | Mechanical Properties           |           |
| -                    | -    | -               | Tensile Strength in Mpa         | 360 min.  |
| -                    | -    | -               | Yield Strength in Mpa           | 220 - 300 |
| -                    | -    | -               | Elongation in %                 | 8 min.    |
| -                    | -    | -               | Reduction of Area in %          | -         |
| -                    | -    | -               | Hardness in HV                  | 80 - 155  |
| -                    | -    | -               | Impact in Joule                 | -         |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| CuZn39Pb1             | DIN      | Germany | Rod                          |
| CuZn39Pb1             | BS       | British | Rod                          |
| CW611N                | BS       | British | Rod                          |
| CuZn39Pb1             | UNE      | Spain   | Rod                          |
| CW611N                | UNE      | Spain   | Rod                          |
| CuZn39Pb1             | UNI      | Italy   | Rod                          |
| CW611N                | DIN      | Germany | Rod                          |

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