

## Material: EN CW609N

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

**Group:** Non Ferrous Copper Alloys

**Sub Group:** EN CW609N 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 % | 3.500 - 4.200   |                                 |           |
| Tin                  | Sn % | 0.300 max.      |                                 |           |
| Other                | Ot % | 0.200 max.      |                                 |           |
| Copper               | Cu % | 57.000 - 59.000 |                                 |           |
| Zinc                 | Zn % | Balance         |                                 |           |
| -                    | -    | -               | Mechanical Properties           |           |
| -                    | -    | -               | Tensile Strength in Mpa         | 360 min.  |
| -                    | -    | -               | Yield Strength in Mpa           | 150 - 520 |
| -                    | -    | -               | Elongation in %                 | 5 min.    |
| -                    | -    | -               | Reduction of Area in %          | -         |
| -                    | -    | -               | Hardness in BHN                 | 90 - 160  |
| -                    | -    | -               | Impact in Joule                 | -         |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| EN 12164 CuZn38Pb4    | DIN      | Germany        | Rod                          |
| C 3604 W              | JIS      | Japan          | Rod                          |
| C 3605 BD             | JIS      | Japan          | Rod                          |
| C 3605 BE             | JIS      | Japan          | Rod                          |
| CuZn38Pb4             | EN       | European Union | Rod                          |
| CuZn38Pb4             | AFNOR NF | France         | Rod                          |
| CW609N                | AFNOR NF | France         | Rod                          |

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