

# Cooper Alloy: MET GRCop-42

## Alternative designation: GRCop-42 / Cu<sub>3</sub>Cr<sub>3</sub>Nb

### Description and general material properties

MET GRCop-42 is a dispersion strengthened copper alloy with high strength and a good resistivity against low cycle fatigue (LCF). With a conductivity reaching up to 75% of IACS, CuCrNb-alloys were originally designed for use in high heat flux applications, like for example in combustion chambers and nozzles, and therefore offer high oxidation resistance in harsh environment.

### Powder characteristics

| Chemical composition |           |           |
|----------------------|-----------|-----------|
| Element              | Min [wt%] | Max [wt%] |
| Cr                   | 3,1       | 3,4       |
| Nb                   | 2,7       | 3,0*      |
| O                    |           | 0,04      |
| Al                   |           | 0,005     |
| Fe                   |           | 0,005     |
| Si                   |           | 0,005     |
| Cu                   | Balance   | Balance   |

\* Cr/Nb ratio of 1,12-1,15

