# CUPROX 681

Braze Welding Alloy

## TECHNICAL DATA SHEET 515

### Specifications:

| Alloy | Working Temperature (˚C) | NF EN ISO 17672 | AWS A5.8 | EN 1044 | EN ISO 3677 |
|---|---|---|---|---|---|
| **Cu-Zn** | 890 | Cu 680 | RBCuZn-B | | B-Cu59Zn(Sn)(Ni)(Mn)(Si)870/890 |

### Characteristics:

**CUPROX 681** is basically an alloy of copper and zinc with small addition of Thin, silicon, nickel, manganese and iron intended to increase adhesion and to control Zn vaporization. Bare rods are to be used or coated with our **POLYFLUX.** Braze Welding alloy with good flowing properties, Suitable for gap brazing. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation. .

### Applications:

**CUPROX 681** is recommended to be used in lock-smith and workshops. This brazing alloy is also recommended for joining: Steels, Cast irons, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with it solidus temperature is >900˚C. When working with Cast Iron, the work pieces should not be overheated. Typical application are found in the tubular construction industry (Metal furniture, Bicycle frames, radiators & towel., warmers ) mining tools heating and cooling systems, etc.…

### Typical Chemical Compositions (%):

| Cu | Zn | Si | Sn | Mn | Ni | Fe | Al/As | Bi/ Sb /Cd | Pb | Max. impurities |
|---|---|---|---|---|---|---|---|---|---|---|
| 58.0 | Balance | 0.10 | 1.0 | 0.25 | 0.8 | 1.2 | <0.01 | <0.01 | <0.025 | <0.20 |

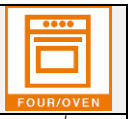
### Typical Physical Properties:

| Coating Colour | Solidus (˚C) | Liquidus (˚C) | Density g/cm³ | Elongation % | Tensile strength (MPa) | Electrical Conductivity (%IACS) | Electrical Resistivity (Micro-ohm-cm) |
|---|---|---|---|---|---|---|---|
| **Customize** | 870 | 890 | 8.40 | - | 450 | - | - |

### Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal. This alloy needs a controlled quench (in excess of 300˚C) to avoid the weakening of the brazed joint.

### Standard Size , Types & Heat Source Recommendations:

| Size (mm) | Type | | | | Type |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| | Bare | Coated | Coil | Preforms | | | | | |
| 1.50,2.00,2.50,3.00, 4.00, 5.00, | √ | √ | √ | √ | Bare | √ | √ | √ | √ |
| | | | | | Coated | √ | X | X | X |

**Customised size other than above standard dimensions are solicited case to case basis**