

# SM 2464

CuproBraz®

Cu64ZnNi3

UNS C 74400

US Inch

High temperature resistant brass for a o headers for **Cu proBraz** heat-exchangers.

## Mechanical Properties

| Alloy   | Temper               | Dimension<br>Gauge<br>inch | Yield<br>R <sub>p0,2</sub><br>ksi | Tensile<br>R <sub>m</sub><br>ksi | Elongation<br>A <sub>50</sub><br>% | Hardness<br>HV |
|---------|----------------------|----------------------------|-----------------------------------|----------------------------------|------------------------------------|----------------|
| SM 2464 | before brazing       | .0016                      | 16.7                              | 50.8                             | 70                                 | 70             |
|         | <i>after brazing</i> | .0016                      | 15.2                              | 49.3                             | 75                                 | 67             |

## Physical Properties

|                         |             | SM 2464               |                                   |                   |                                   |
|-------------------------|-------------|-----------------------|-----------------------------------|-------------------|-----------------------------------|
| Density                 | .307        | lb/ inch <sup>3</sup> | 8500                              | kg/m <sup>3</sup> |                                   |
| Melting temperature     | >1670       | °F                    | >910                              | °C                |                                   |
| Specific Heat           |             | BTU / lb°F            | 0.377                             | kJ/(kg °C)        |                                   |
| Electrical conductivity |             | IACS %                |                                   | MS/m              |                                   |
| Electrical resistivity  |             |                       |                                   | IACS %            |                                   |
| Thermal conductivity    |             | BTU/(ft h°F)          |                                   | nΩ meter          |                                   |
| Thermal expansion       |             |                       |                                   | W/(m °C)          |                                   |
|                         | 68 - 570 °F | 90                    | 10 <sup>-7</sup> °F <sup>-1</sup> | 19                | 10 <sup>-6</sup> °C <sup>-1</sup> |
| Young's modulus E       | 14900       | ksi                   | 103 400                           | MPa               |                                   |

## Heat Treatment

**Brazing** with OKC 600 **CuproBraz®** 1200 °F / <15 minutes

**Soft annealing** 1300 °F

Time dependent on size and volume: propose 2 hours

**Stress relief annealing** 525 - 625 °F

## Formability

Easy to form in annealed condition , however decreasing with increased hardness.

Soft annealed                      0 x t                      bending radius  
t = gauge

## SM 2464

CuproBraze®

### Welding

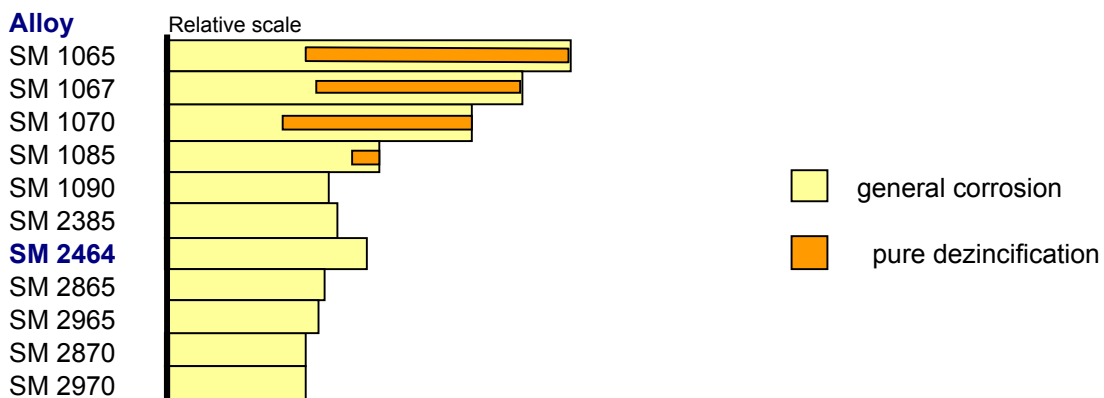
Due to zincontent, some counter-measures to stop vaporization of zinc are necessary. Otherwise the alloy is suitable for soldering, brazing and welding

**This high temperature resistant alloy is specially suitable for furnace brazing operations and used as header material in the CuproBraze heat-exchangers.**

### Corrosion Properties

Durable to water and organic compounds, as well as land, sea and industrial atmospheres.

### **Dezincification comparison:**



To minimize the risk for **stress corrosion cracking** we strongly recommend stress-relief annealing after all cold forming operations.  
In general the higher the copper content, the better the resistance to stress corrosion.

### Surface Treatment.

Colour is yellowish but could easily be influenced by many types of surface treatments.