

SM 2385

CuproBraze®

US
inch

CuZn14Fe0.9

UNS C 66420

High temperature resistant brass for **CuproBraze** heat-exchangers.

Mechanical Properties

Standard temper values for the strip as well as *typical values* after brazing process at customer in the table below.

Alloy	Temper	Dimension Gauge inch	Yield R _{p0.2} ksi	Tensile R _m ksi	Elongation A ₅₀ %	Hardness HV
SM 2385	before brazing	.00354-	49.3	60.9	25-	120-135
	<i>after brazing</i>		<i>39.2</i>	<i>58</i>	<i>30-</i>	<i>125</i>

Physical Properties

	SM 2385	<i>after brazing</i>	
Density	.316		lb/ inch ³
Smelting temperature	1850-1880		°F
Specific heat	.09		BTU / lb°F
Electrical conductivity	35	30	IACS %
Electrical resistivity	92	79	BTU/(ft h°F)
Thermal expansion	68 - 570 °F	105	10 ⁻⁷ °F ⁻¹
Young's modulus E	18500		ksi

Heat Treatment

Soft annealing >1300 °F Time dependent on size and volume.

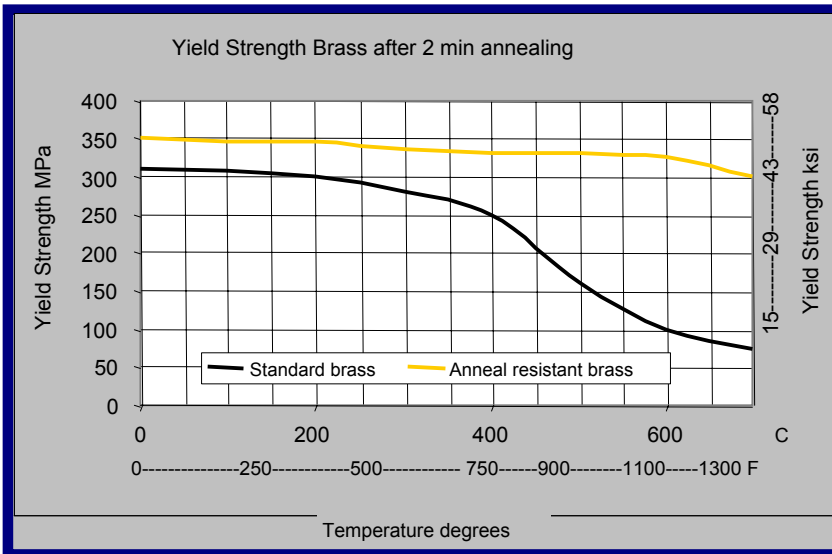
Brazing with OKC 600 **CuproBraze®** 1200 °F/<15 minutes

Stress relief annealing 525 - 625 °F

SM 2385

CuproBraz®

Heat Resistance and Softening Characteristics



Comparison between standard brasses and heat resistant brass **SM2385**

Formability

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

Soft annealed $0 \times t$ bending radius
 $t =$ gauge

Welding

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

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

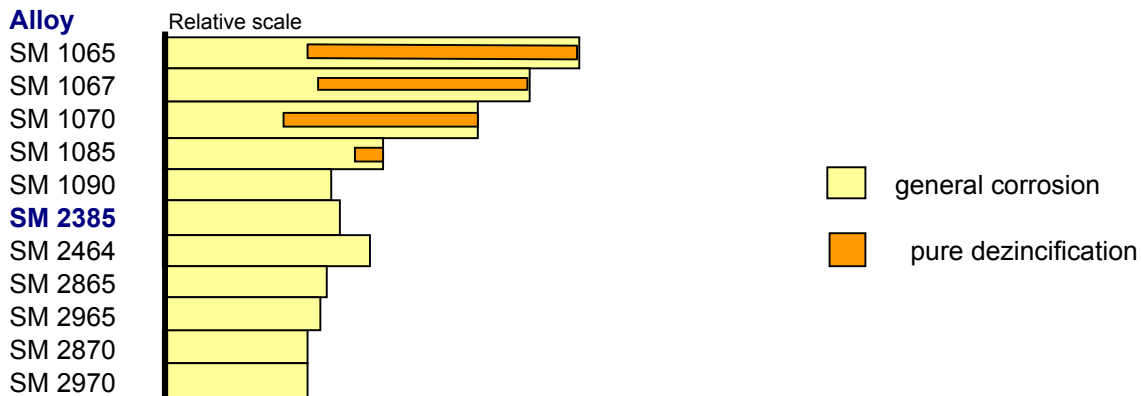
SM 2385

CuproBraze®

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.

Colours are reddish to brownish but could easily be influenced by many types of surface treatments.

Outokumpu Copper Strip AB

Box 550

721 10 Västerås Sweden

www.outokumpu.com

www.cuprobraze.com

rev. 4

apr-04

subject to change without notice