

UNS Wrought and Cast Alloy – Registration Request Form

Email filled-out form to Jim Michel: registrar@unscopperalloys.org

Requested Alloy # C **Date:** **Requestor:**

(add a suggested identification for preliminary consideration)

Company:

Contact Representative:

Street Address:

City: State: Zip code: Country:

E-mail: Phone: Fax:

CHEMICAL COMPOSITION

(in percent, maximum, unless shown as a range or a minimum.) (include all significant Elements and appropriate composition range)

Cu (incl. Ag) **Pb** **Sn** **Zn** **Fe** **P** **Ni** (incl. Co) **Mn** **Si**

Other Elements

(Note: Maximum number of included elements not to exceed 14.)

Cu + sum of named elements **% min.**

MECHANICAL PROPERTIES

(Cut and paste this section to present multiple product forms and/or tempers.)

Alloy Form Strip Sheet Rod Bar Wire Forging

Temper Code **Temper Description**

(as stated in ASTM B601, such as O10 Cast and Annealed)

	US Customary units		SI Units
Tensile Strength: Typical		ksi	MPa
	Min	ksi	MPa
	Max	ksi	MPa
Yield Strength			
[type]: Typical		ksi	MPa
	Min	ksi	MPa
	Max	ksi	MPa
Elongation		ksi	MPa
Hardness [type]		ksi	MPa
Shear Strength		ksi	MPa
Compression Strength		ksi	MPa
Impact Strength		ksi	MPa
Fatigue Strength		ksi	MPa

PHYSICAL PROPERTIES

	US Customary units	SI Units
Melting Point (Liquidus)	°F	°C
(Solidus)	°F	°C
Density	lb/cu in. at 68°F	gm/cu cm at 20°C
Specific Gravity		
Electrical Resistivity	ohm.cmil/ft at 68°F	microhm-cm at 20°C
Electrical Conductivity	% IACS at 68°F	Siemens/cm at 20°C
Coefficient of Thermal Expansion	10 ⁻⁶ per °F (68 - 572°F)	10 ⁻⁶ per °C (20°C - 300°C)
Magnetic Permeability		
Thermal Conductivity	Btu /sq ft/ft/hr/°F at 68°F	W/m °K at 20°C
Modulus of Elasticity in Tension	ksi	MPa
Modulus of Rigidity	ksi	MPa
Poisson's Ratio		

FABRICATION PRACTICES

Joining Technique

Suitability

Joining Technique	Excellent	Good	Fair	Poor	Not recommended
Soldering	Excellent	Good	Fair	Poor	Not recommended
Brazing	Excellent	Good	Fair	Poor	Not recommended
Oxyacetylene Welding	Excellent	Good	Fair	Poor	Not recommended
Gas Shielded Arc Welding	Excellent	Good	Fair	Poor	Not recommended
Coated Metal Arc Welding	Excellent	Good	Fair	Poor	Not recommended
Resistance Welding—Spot	Excellent	Good	Fair	Poor	Not recommended
—Seam	Excellent	Good	Fair	Poor	Not recommended
—Butt	Excellent	Good	Fair	Poor	Not recommended
Capacity for Being Cold Worked	Excellent	Good	Fair	Poor	Not recommended
Capacity for Being Hot Formed	Excellent	Good	Fair	Poor	Not recommended

Hot Forgability Rating % (Forging Brass = 100)

Machinability Rating % (C36000 Free Cutting Brass = 100)

Typical Forms

Typical Uses

Typical Reasons for Uses

Intended Applicable Standards (if applicable)

CASTING CHARACTERISTICS

Patternmakers Shrinkage (in. fractional dimension), Shrinkage during Aging (in. fractional dimension)

Shrinkage during Freezing (in. fractional dimension), Effect of Section Size (Large Medium Small)

Shrinkage (Large Medium Small), Casting Yield (Large Medium Small)

Drossing (Large Medium Small), Fluidity (Large Medium Small)

Gassing (Large Medium Small)