

# C95400

## US EPA Registered Antimicrobial

### Chemical Composition

(%max., unless shown as range or min.)

	Cu	Al	Fe	Mn	Ni <sup>(1)</sup>
Min./Max.	83.0 min	10.0-11.5	3.0-5.0	.50	1.5
Nominal	83.2	10.8	4.0	-	-

(1) Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.5% min.

### Mechanical Properties (measured at room temperature, 68 F (20 C))

Temper	Section Size	Cold Work	Typ/Min	Temp	Tensile Strength	Yield Strength (0.5% ext. under load)	Yield Strength (0.2% offset)	Yield Strength (0.05% offset)	Rockwell Hardness	Vickers Hard.	Brinell Hard.	Shear Strength	Fatigue Strength*	Izod Impact Strength	
															in. mm
<b>As Sand Cast</b>															
M01	0.0	0	TYP	68	85	35	-	-	18-	-	-	170	47	28	16.0
	0.0			20	586	241	-	-	18-	-	-	170	324	193	22.0
<b>As Centrifugal Cast</b>															
TQ50	0.0	0	SMIN	68	90	45	-	-	6	-	-	190	-	-	0.0
	0.0			20	620	310	-	-	6	-	-	190	-	-	0.0
M02	0.0	0	SMIN	68	75	30	-	-	12-	-	-	150	-	-	0.0
	0.0			20	515	205	-	-	12-	-	-	150	-	-	0.0
<b>As Continuous Cast</b>															
TQ50	0.0	0	SMIN	68	95	45	-	-	10-	-	-	-	-	-	0.0
	0.0			20	655	310	-	-	10-	-	-	-	-	-	0.0
M07	0.0	0	SMIN	68	85	32	-	-	12-	-	-	-	-	-	0.0
	0.0			20	586	221	-	-	12-	-	-	-	-	-	0.0
<b>As Permanent Mold Cast</b>															
M05	0.0	0	SMIN	68	100	40	-	-	10-	-	-	-	-	-	0.0
	0.0			20	690	275	-	-	10-	-	-	-	-	-	0.0
<b>As Sand Cast</b>															
TQ50	0.0	0	TYP	68	105	54	-	-	8	-	-	195	50	35	11.0
	0.0			20	724	372	-	-	8	-	-	195	345	241	15.0
M01	0.0	0	SMIN	68	75	30	-	-	12-	-	-	150	-	-	0.0
	0.0			20	517	207	-	-	12-	-	-	150	-	-	0.0
M01	0.0	0	SMIN	68	75	30	-	-	12-	-	-	150	-	-	0.0
	0.0			20	515	205	-	-	12-	-	-	150	-	-	0.0
M01	0.0	0	SMIN	68	75	30	-	-	-	-	-	-	-	-	0.0
	0.0			20	517	207	-	-	-	-	-	-	-	-	0.0
<b>As Permanent Mold Cast</b>															
M05	0.0	0	TYP	68	105	46	-	-	11-	-	-	-	-	-	0.0
	0.0			20	725	320	-	-	11-	-	-	-	-	-	0.0
<b>As Sand Cast</b>															
TQ50	0.0	0	MIN	68	90	45	-	-	6	-	-	190	-	-	0.0
	0.0			20	620	310	-	-	6	-	-	190	-	-	0.0
TQ50	0.0	0	SMIN	68	90	45	-	-	6	-	-	190	-	-	0.0
	0.0			20	621	310	-	-	6	-	-	190	-	-	0.0

\*Fatigue Strength:  $100 \times 10^6$  cycles, unless indicated as  $[N] \times 10^6$ .

### Physical Properties

<="" b="">	US Customary
Melting Point - Liquidus	1900 F
Melting Point - Solidus	1880 F
Density	0.269 lb/in <sup>3</sup> at 68 F
Specific Gravity	7.450
Electrical Resistivity	80.20 ohms-cmil/ft @ 68 F
Electrical Conductivity	13 %IACS @ 68 F

Thermal Conductivity	33.90 Btu · ft/(hr · ft <sup>2</sup> · °F) at 68F
Coefficient of Thermal Expansion	$9 \cdot 10^{-6}$ per °F (68-572 F)
Specific Heat Capacity	0.10 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	15500 ksi
Magnetic Permeability*	1.20
Magnetic Permeability**	1.270

\*TQ 50 Temper, Field Strength 16 kA/m

\*\*As Cast, Field Strength 16 kA/m