

MicroGuard™ Antimicrobial Copper Alloy Guide

Alloys available in sheet, strip, plate, welded tube and foil forms.

UNS/CDA Number	C11000	C26000	C66908	C66913	C66925	C70600	C71000	C75200
ASTM Spec Number	B152	B36	-	-	-	B122	B122	B122
PMX Alloy Number	110	260	66908	66913	66925	706	710	752
EPA Registered MicroGuard Group	I	IV	III	IV	IV	II	III	V

Chemistry								
Copper (Cu)	99.9	70	85	73	70.5	88.6	Bal	65
Oxygen (O)	0.05							
Zinc (Zn)		30	7.5	10	19		1	17
Tin (Sn)			0.5	0.5	0.5			
Nickel (Ni)			1	1	1	10	19.0-23.0	18
Iron (Fe)			0.025	0.025	0.025	1.4	0.75	
Manganese (Mn)			5.5	13	9		1	

Physical Properties								
Density lb/cu. in. @ 68° F	0.323	0.308	0.312	0.295	0.298	0.323	0.323	0.316
Modulus of Elasticity x 1000 Ksi (10 ⁶ psi)	17	16	16	15	15	18	20	18
Electrical Conductivity % I.A.C.S. @ 68° F (Annealed)	101	28	7.2	3.5	4.5	9	6.5	6

Tensile Strength x Ksi (Kgf/mm ² =Ksi x .7031)								
Annealed (SOXX) (TM00)	26-33	45-61	63	67	64	43-50	43-53	53-63
1/4 Hard (H01) (TM00S)	34-42	49-59	-	75	72	51-67	47-63	58-72
1/2 Hard (H02) (TM02)	37-46	57-67	75	84	81	58-72	56-70	66-80
3/4 Hard (H03) (TM03)	41-50	64-74	-	-	-	-	-	74-86
Hard (H04) (TM04)	43-52	71-81	84	92	89	71-83	67-79	78-91
Extra Hard (H06) (TM06)	47-56	83-92	91	100	97	73-85	-	86-98
Spring (H08) (TM08)	50-58	91-100	100	106	-	78-88	-	90-101
Extra Spring (H10)	52 min	95-104	-	-	-	-	-	96 min

Yield Strength x Ksi (0.2% offset)(kgf/mm ² =Ksi x .7031) Nominal								
Annealed (SOXX) (TM00)	11	21	41	45	32	19	21	25
1/4 Hard (H01) (TM00S)	31	33	-	65	-	53	48	45
1/2 Hard (H02) (TM02)	37	46	66	77	-	63	52	63
3/4 Hard (H03) (TM03)	43	62	-	-	-	-	-	75
Hard (H04) (TM04)	45	72	77	87	-	75	71	82
Extra Hard (H06) (TM06)	50	83	85	96	-	76	-	91
Spring (H08) (TM08)	52	86	94	108	-	76 min	-	93
Extra Spring (H10)	54 min	90	-	-	-	-	-	95 min

Elongation (% in 2 inches) Nominal or Indicated								
Annealed (SOXX) (TM00)	35	55	38	36	32	35	40	35
1/4 Hard (H01) (TM00S)	23	46	-	23	-	20	15	20
1/2 Hard (H02) (TM02)	20	30	16	12	-	12	5	8
3/4 Hard (H03) (TM03)	14	16	-	-	-	-	-	4
Hard (H04) (TM04)	9	10	4	3	-	3	2	3
Extra Hard (H06) (TM06)	4	4	2	2	-	2	-	2
Spring (H08) (TM08)	3	1	1	1	-	1	-	1
Extra Spring (H10)	3 max	3 max	-	-	-	-	-	1 max

Dash = Not Applicable

Other alloys are available. Please provide PMX with your requirements.
The above data is for comparative purposes only and is not intended for use as definitive specifications.

MicroGuard™ Antimicrobial Copper Gauge Chart		
Gauge Number	Decimal Equivalent	Tolerance Plus/Minus
11	.125	.003
13	.090	.002
14	.075	.002
16	.060	.002
18	.048	.002
20	.036	.001
21	.032	.001
24	.024	.001

MicroGuard™ Touch Surfaces

EPA registered MicroGuard antimicrobial copper touch surfaces continuously reduce bacterial* contamination, killing 99.9% of infectious bacteria* within two hours of exposure. EPA registration number 85290-1 through 5.

* Independent laboratory testing demonstrated effective antibacterial activity against Methicillin-resistant Staphylococcus aureus (MRSA), Escherichia coli O157:H7, Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa and Vancomycin-resistant Enterococcus faecalis (VRE).