ALCAVIL®
COPPER PROVIDE INDUSTRY

PROPIEDADES FÍSICAS MINIMAS PARA ALEACIONES RWMA

TRADUCCIÓN: UP TO= ARRIBA DE OVER= ABAJO DE

MINIMUM PHYSICAL PROPERTIES FOR RWMA ALLOYS

GROUP A* COPPER BASE ALLOYS		HARDNESS ROCKWELL			CONDUCTIVITY % I.A.C.S.			YIELD STRENGTH ksi (typical) (5% Ext Under Load)			ULTIMATE TENSILE STRENGTH ksi			ELONGATION % IN 2" OR 4" DIAMETERS		
SIZE RANGE		CLASS			CLASS			CLASS			CLASS			CLASS		
IN	MM	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
DIAMETER - ROUND ROD STOCK (COLD WORKED)																
UP TO 1"	UP TO 25	65 HRB	75 HRB	90 HRB	80%	75%	45%	45	55	90	60	65	95	13%	13%	9%
OVER 1 TO 2	OVER 25 TO 51	60 HRB	70 HRB	90 HRB	80%	75%	45%	45	55	90	55	59	92	14%	13%	9%
OVER 2 TO 3	OVER 51 TO 76	55 HRB	65 HRB	90 HRB	80%	75%	45%	45	55	90	50	55	88	15%	13%	9%
THICKNESS - SQUARE, RECTANGULAR AND HEXAGONAL BAR STOCK (COLD WORKED)																
UP TO 1"	UP TO 25	55 HRB	70 HRB	90 HRB	80%	75%	45%	45	45	90	60	65	95	13%	13%	9%
OVER 1"	OVER 25	50 HRB	65 HRB	90 HRB	80%	75%	45%	45	40	90	50	55	90	14%	13%	9%
THICKNESS - FORGINGS																
UP TO 1"	UP TO 25	55 HRB	65 HRB	90 HRB	80%	75%	45%	45	45	50	60	55	94	12%	13%	9%
OVER 1 TO 2	OVER 25 TO 51	50 HRB	65 HRB	90 HRB	80%	75%	45%	45	45	50	50	55	90	13%	13%	9%
OVER 2	OVER 51	50 HRB	65 HRB	90 HRB	80%	75%	45%	45	40	50	50	55	88	13%	13%	9%
CASTINGS																
ALL	ALL	NA	55 HRB	90 HRB	NA	70%	45%	NA	20	45	NA	45	75	NA	12%	5%

All materials are in fully heat treated condition unless otherwise specified. Round rod up to 1" (25 mm) diameter is fully heat treated and cold worked.

CHEMICAL COMPOSITION OF RWMA MATERIALS

RWMA CLASS	RWMA NUMBER	DESCRIPTION	Cu (incl. Ag)	Fe	W	Cd	Ni	Co	Cr	Si	Be	Pb	Zr	Al
GROUP A - COPPER BASE ALLOYS														
1	15000	Zirconium Copper	99.80 min.										.10 - .20	
2	18150	Chromium-Zirconium Copper	REM.						.5- 1.5				.05 - .25	
2	18200	Chromium Copper	REM.	.10 max.					.6 - 1.2	.10 max.		.05 max.		
3	17500	Cobalt-Beryllium Copper	REM.	.10 max.				2.4 - 2.7		.20 max.	.4 - .7 max.			.20 Max.
3	17510	Nickel-Beryllium Copper	REM.	.10 max.			1.4 - 2.2	.30 max.		.20 max.	.2 - .6			.20 max.
3	18000	Nickel-Silicon Chromium Copper	REM.	.15 max.			1.8 - 3.0		.1 - .8	.4 - .8				
4	17200	Beryllium Copper	REM.				Ni + Co, .20% min., Ni + Fe + Co .6% max.			.20 max.	1.8 - 2.0	.02 max.		.20 max.
GROUP B - REFRACTORY METAL AND REFRACTORY METAL COMPOSITES														
10	74450	Copper Tungsten	43-47		REM.									
11	74400	Copper Tungsten (ASTM B702 C1 D)	23-27		REM.									
12	74350	Copper Tungsten (ASTM B702 C1E)	18-22		REM.									
13	74300	Copper Tungsten			99.9 min.									
14	42300	Molybdenum (ASTM B387 Alloy 360 or 361)			(Mo) 99.9 Min.									

RWMA numbers correspond to five digits following a "C" in the Copper Development Association and Unified Numbering Systems.