



Copper Alloy CuA

Product format:

Bar

Technical characteristics:

Copper alloy rods (round and square)

## MECHANICAL CHARACTERISTICS

Designations		Nominal diameter or distance across flats		Tensile strength	Yield strength at 0.2%	Elongation			Hardness				
Material		Metallurgical state	From	Until included	R <sub>m</sub>	R <sub>p0.2</sub>	A <sub>100mm</sub>	A <sub>11.3</sub>	A	HB		HV	
Symbol	Numerical				N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	%	%	mín.	máx.	mín.	máx.
					mín.	aprox.	mín.	mín.	mín.				
CuNi10Fe1Mn	CW352H	<b>M</b>	<b>2</b>	<b>80</b>	<b>Manufacturing gross</b>								
		R280	10	80	280	(90)	-	-	30	-	-	-	-
		H070	10	80	-	-	-	-	-	70	100	75	105
		R350	2	20	350	(150)	6	8	10	-	-	-	-
		H100	2	20	-	-	-	-	-	100	-	105	-
CuNi30Mn1Fe	CW354H	<b>M</b>	<b>2</b>	<b>80</b>	<b>Manufacturing gross</b>								
		R340	10	80	340	(120)	-	-	30	-	-	-	-
		H080	10	80	-	-	-	-	-	80	110	85	115
		R420	2	20	420	(180)	10	12	14	-	-	-	-
		H110	2	20	-	-	-	-	-	110	-	115	-

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Symbol	Numerical					N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	%	%	mín.	máx.	mín.	máx.		
						mín.	approx.	mín.	mín.	mín.						
CuNi1Si	CW109C	R590	2	-	30	590	(570)	8	10	12	-	-	-	-		
		H160	2	-	30	-	-	-	-	-	160	-	170	-		
		R540	-	30	50	540	(450)	-	-	10	-	-	-	-		
		H140	-	30	50	-	-	-	-	-	140	-	145	-		
		R500	-	50	80	500	(420)	-	-	10	-	-	-	-		
		H125	-	50	80	-	-	-	-	-	125	-	130	-		
CuNi2Si	CW111C	<b>M</b>	<b>2</b>	<b>-</b>	<b>80</b>	<b>Manufacturing gross</b>										
		R260	2	-	80	260	(90)	25	30	35	-	-	-	-		
		H060	2	-	80	-	-	-	-	-	60	90	65	95		
		R410	2	-	30	410	(370)	5	6	8	-	-	-	-		
		H115	2	-	30	-	-	-	-	-	115	165	120	170		
		R380	-	30	50	380	(330)	-	-	10	-	-	-	-		
		H100	-	30	50	-	-	-	-	-	100	150	105	155		
		R320	-	50	80	320	(230)	-	-	15	-	-	-	-		
		H090	-	50	80	-	-	-	-	-	90	140	95	145		
		R490	2	-	80	490	(370)	10	12	15	-	-	-	-		
		H150	2	-	80	-	-	-	-	-	150	200	155	205		
		R640	2	-	30	640	(620)	6	8	10	-	-	-	-		
		H180	2	-	30	-	-	-	-	-	180	-	190	-		
		R600	-	30	50	600	(510)	-	-	10	-	-	-	-		
		H165	-	30	50	-	-	-	-	-	165	-	175	-		
		R550	-	50	80	550	(430)	-	-	10	-	-	-	-		
		H155	-	50	80	-	-	-	-	-	155	-	165	-		

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Material		Metallurgical state	From	Greater than	Until included	R <sub>m</sub>	R <sub>p0.2</sub>	A <sub>100mm</sub>	A <sub>11.3</sub>	A	HB		HV		
Symbol	Numerical					N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	%	%	mín.	máx.	mín.	máx.	
						mín.	approx.	mín.	mín.	mín.					
<b>CuCo1Ni1Be</b> <b>CuCo2Be</b> <b>CuNiP</b> <b>CuNi2Be</b>		CW103C CW104C CW108C CW110C	<b>M</b>	<b>2</b>	<b>-</b>	<b>80</b>	<b>Manufacturing gross</b>								
			R250	2	-	80	250	(140)	20	22	25	-	-	-	-
			H065	2	-	80	-	-	-	-	-	65	95	70	100
			R500	2	-	25	500	(430)	5	6	8	-	-	-	-
			H135	2	-	25	-	-	-	-	-	135	175	140	180
			R450	-	25	40	450	(380)	-	-	10	-	-	-	-
			H125	-	25	40	-	-	-	-	-	125	175	130	180
			R400	-	40	80	400	(330)	-	-	10	-	-	-	-
			H110	-	40	80	-	-	-	-	-	110	160	115	165
			R650	2	-	80	650	(500)	8	10	12	-	-	-	-
			H190	2	-	80	-	-	-	-	-	190	-	200	-
			R800	2	-	25	800	(730)	(3)	(4)	5	-	-	-	-
			H220	2	-	25	-	-	-	-	-	220	-	230	-
			R750	-	25	40	750	(680)	-	-	5	-	-	-	-
			H210	-	25	40	-	-	-	-	-	210	-	220	-
			R700	-	40	80	700	(630)	-	-	5	-	-	-	-
			H200	-	40	80	-	-	-	-	-	200	-	210	-

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Symbol	Numerical					N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	%	%	mín.	mín.	mín.	mín.	máx.	mín.	máx.
						mín.	approx.	mín.	mín.	mín.							
CuCr1 CuCr1Zr	CW105C CW106C	<b>M</b>	<b>4</b>	-	<b>80</b>	<b>Manufacturing gross</b>											
		R200	8	-	80	200	(60)	-	-	30	-	-	-	-			
		H065	8	-	80	-	-	-	-	-	65	90	70	95			
		R440	4	-	25	440	(350)	-	9	10	-	-	-	-			
		H420	-	25	50	420	(330)	-	-	12	-	-	-	-			
		R400	-	50	80	400	(310)	-	-	12	-	-	-	-			
		H135	4	-	80	-	-	-	-	-	135	180	140	185			
		R470	4	-	25	470	(380)	-	7	8	-	-	-	-			
		H450	-	25	50	450	(360)	-	-	10	-	-	-	-			
		R150	4	-	50	-	-	-	-	-	150	-	155	-			
		<b>M</b>	<b>2</b>	-	<b>80</b>	<b>Manufacturing gross</b>											
		R240	2	-	80	240	(90)	25	30	35	-	-	-	-			
		H050	2	-	80	-	-	-	-	-	50	75	55	80			
R410	2	-	30	410	(320)	5	7	9	-	-	-	-					
H105	2	-	30	-	-	-	-	-	105	150	110	155					
R350	-	30	50	350	(280)	-	-	12	-	-	-	-					
H095	-	30	50	-	-	-	-	-	95	140	100	145					
R300	-	50	80	300	(210)	-	-	16	-	-	-	-					
H085	-	50	80	-	-	-	-	-	85	130	90	135					
R440	2	-	80	440	(320)	12	15	17	-	-	-	-					
H120	2	-	80	-	-	-	-	-	120	170	125	175					