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**APPENDIX E3M**

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**TUBE PROPERTIES (METRIC)  
FOR COPPER TUBE**

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(Per ASTM B88)

**TABLE E3.1M** Dimensions, Mass, and Tolerances in Diameter and Wall Thickness for Metric Copper

Water tube sizes (all tolerances are plus and minus except as otherwise indicated.)									
Wall thickness and tolerances, mm									
Nominal or standard size, mm	Type A		Type B		Type C		Theoretical mass, kg/m		
	Wall thickness	Tolerance (b)	Wall thickness	Tolerance (b)	Wall thickness	Tolerance (b)	Type A	Type B	Type C
6	0.8	0.08	0.7	0.07	0.6	c	0.117	0.104	0.091
8	0.9	0.09	0.8	0.08	0.6	c	0.179	0.162	0.125
10	0.9	0.09	0.8	0.08	0.6	c	0.23	0.207	0.158
12	1.2	0.1	0.9	0.09	0.6	0.06	0.364	0.28	0.192
15	1.2	0.1	1	0.1	0.7	0.07	0.465	0.393	0.281
18	1.2	0.1	1	0.1	0.7	0.07	0.566	0.477	0.34
22	1.6	0.15	1.1	0.1	0.8	0.08	0.917	0.646	0.476
28	1.6	0.15	1.2	0.1	0.9	0.09	1.19	0.903	0.685
35	1.6	0.15	1.4	0.15	1.1	0.1	1.5	1.32	1.05
42	1.8	0.2	1.5	0.15	1.2	0.1	2.03	1.71	1.37
54	2.1	0.2	1.7	0.15	1.5	0.15	3.06	2.5	2.21
67	2.4	0.25	2	0.2	1.6	0.15	4.35	3.65	2.94
79	2.8	0.3	2.3	0.25	1.8	0.2	5.99	4.95	3.9
105	3.4	0.35	2.8	0.3	2.4	0.25	9.7	8.04	6.92
130	4	0.4	3.1	0.3	2.7	0.25	14.2	11	9.65
156	4.8	0.5	3.5	0.35	3.1	0.3	20.3	15	13.3
206	6.8	0.7	5	0.5	4.3	0.45	38	28.2	24.4
257	8.5	0.85	6.3	0.65	5.4	0.55	59.3	44.4	38.2
308	10.3	1	7.1	0.7	6.4	0.65	86.1	60	54.2

<sup>b</sup> Maximum deviation at any one point.<sup>c</sup> Indicates that the material is not generally available or that no tolerance has been established.