## Plumbing Copper Tubes Mechanical Properties Data Sheet



## **Mechanical Properties**

BS EN 1057 Plumbing Copper Tubes

## **Dimensions and Tolerances** (includes chrome

plated and PVC covered)



O.D.   Commons   Commons	plated and PVC covered)							
	0 D	Wall	Temper	Max Working	Thickness	Diameter 1		
6         0.6 (TX)         Half Hard         133         ±10%         ±0.04mm         ±0.09mm           6         0.6 (Soft)         90         ±10%         ±0.04mm         ±0.09mm           8         0.6 (TX)         Half Hard         97         ±10%         ±0.04mm         ±0.09mm           8         0.6 (Soft)         66         ±10%         ±0.04mm         ±0.09mm           8         0.8 (TY)         Half Hard         136         ±10%         ±0.04mm         ±0.09mm           10         0.6 (TX)         Half Hard         77         ±10%         ±0.04mm         ±0.09mm           10         0.6 (TX)         Half Hard         77         ±10%         ±0.04mm         ±0.09mm           10         0.7 (TY)         Soft         62         ±10%         ±0.04mm         ±0.09mm           10         0.8 (TY)         Half Hard         63         ±10%         ±0.04mm         ±0.09mm           12         0.6 (TX)         Half Hard         87         ±10%         ±0.04mm         ±0.09mm           12         0.8 (TY)         Half Hard         87         ±10%         ±0.04mm         ±0.09mm           15         1.0 (TY)         Soft			remper	Pressure bar up		Mean	Including Ovality	
6 0.6   Soft   90			Half Hard			± 0.04mm	±0.09mm	
6								
8								
8	8					± 0.04mm	±0.09mm	
8		0.6	Soft			± 0.04mm	Not applicable	
10	8	0.8 (TY)		136	±10%			
10	10	0.6 (TX)	Half Hard	77	±10%	± 0.04mm	±0.09mm	
10		0.7 (TY)	Soft	62	±10%	± 0.04mm	Not applicable	
12		0.8 (TY)	Half Hard	106	±10%	± 0.04mm		
12	12	0.6 (TX)	Half Hard	63		± 0.04mm	±0.09mm	
15	12		Half Hard	87			±0.09mm	
15	15	0.7 (TX)	Half Hard				±0.09mm	
15	15	1.0 (TY)	Half Hard			± 0.04mm	±0.09mm	
1.2 (TY)	15						Not applicable	
1.2 (TY) Soft 57 ±15% ± 0.05mm Not applicable 0.9 (TX) Half Hard 40 ±10% ± 0.05mm ±0.10mm ±0.10mm 35 1.0 (LiteX) Hard 42 ±15% ± 0.06mm ±0.07mm 35 1.2 (TX) Half Hard 42 ±10% ± 0.06mm ±0.11mm 35 1.5 (TY) Hard 44 ±10% ± 0.06mm ±0.07mm 42 1.0 (LiteX) Hard 35 ±15% ± 0.06mm ±0.07mm 42 1.2 (TX) Half Hard 35 ±15% ± 0.06mm ±0.11mm 42 1.5 (TY) Hard 53 ±10% ± 0.06mm ±0.11mm 42 1.5 (TY) Hard 53 ±10% ± 0.06mm ±0.07mm 54 1.2 (LiteX) Hard 33 ±15% ± 0.06mm ±0.07mm 54 1.2 (TX) Half Hard 27 ±10% ± 0.06mm ±0.07mm 54 1.2 (TX) Half Hard 27 ±10% ± 0.06mm ±0.11mm 54 2.0 (TY) Hard 55 ±10% ± 0.06mm ±0.11mm 66.7 1.2 (TX) Hard 26 ±15% ± 0.07mm ±0.10mm 66.7 1.5 (TX) Hard 26 ±15% ± 0.07mm ±0.10mm 76.1 1.5 (TX) Hard 29 ±15% ± 0.07mm ±0.10mm 76.1 2.0 (TY) Hard 39 ±15% ± 0.07mm ±0.10mm 108 1.5 (TX) Hard 20 ±15% ± 0.07mm ±0.10mm 108 1.5 (TX) Hard 20 ±15% ± 0.07mm ±0.20mm 108 2.5 (TY) Hard 34 ±15% ± 0.07mm ±0.20mm 108 2.5 (TY) Hard 34 ±15% ± 0.07mm ±0.20mm ±0.20mm 133 1.5 (TX) Hard 16 ±15% ± 0.20mm ±0.70mm ±0.70mm	22	0.9 (TX)	Half Hard		±10%	± 0.05mm	±0.10mm	
22 1.2 (TY) Soft 57 ±15% ±0.05mm Not applicable 28 0.9 (TX) Half Hard 40 ±10% ±0.05mm ±0.10mm 28 1.2 (TY) Half Hard 55 ±15% ±0.05mm ±0.10mm 35 1.0 (LiteX) Hard 42 ±15% ±0.06mm ±0.07mm 35 1.2 (TX) Half Hard 42 ±10% ±0.06mm ±0.11mm 35 1.5 (TY) Hard 64 ±10% ±0.06mm ±0.07mm 42 1.0 (LiteX) Hard 35 ±15% ±0.06mm ±0.07mm 42 1.2 (TX) Half Hard 35 ±10% ±0.06mm ±0.07mm 42 1.5 (TY) Hard 53 ±10% ±0.06mm ±0.07mm 54 1.2 (LiteX) Hard 33 ±15% ±0.06mm ±0.07mm 54 1.2 (LiteX) Hard 33 ±15% ±0.06mm ±0.07mm 54 1.2 (TX) Half Hard 27 ±10% ±0.06mm ±0.07mm 54 1.2 (TX) Half Hard 27 ±10% ±0.06mm ±0.07mm 66.7 1.2 (TX) Hard 26 ±15% ±0.06mm ±0.07mm 66.7 1.2 (TX) Hard 26 ±15% ±0.07mm ±0.10mm 66.7 2.0 (TY) Hard 45 ±15% ±0.07mm ±0.10mm 76.1 1.5 (TX) Hard 29 ±15% ±0.07mm ±0.10mm 76.1 2.0 (TY) Hard 39 ±15% ±0.07mm ±0.10mm 108 1.5 (TX) Hard 20 ±15% ±0.07mm ±0.10mm 108 1.5 (TX) Hard 44 ±15% ±0.07mm ±0.20mm 108 2.5 (TY) Hard 45 ±15% ±0.07mm ±0.20mm ±0.20mm 108 2.5 (TY) Hard 46 ±15% ±0.07mm ±0.20mm ±0.20mm 108 2.5 (TX) Hard 46 ±15% ±0.07mm ±0.20mm ±0.20mm 108 2.5 (TX) Hard 46 ±15% ±0.07mm ±0.20mm ±0.70mm 108 2.5 (TX) Hard 46 ±15% ±0.07mm ±0.20mm ±0.70mm 108 2.5 (TX) Hard 46 ±15% ±0.20mm ±0.70mm ±0.70mm 108 2.5 (TX) Hard 46 ±15% ±0.20mm ±0.70mm	22			69		± 0.05mm	±0.10mm	
28       1.2 (TY)       Half Hard       55       ±15%       ±0.05mm       ±0.10mm         35       1.0 (LiteX)       Hard       42       ±15%       ±0.06mm       ±0.07mm         35       1.2 (TX)       Half Hard       42       ±10%       ±0.06mm       ±0.11mm         35       1.5 (TY)       Hard       35       ±15%       ±0.06mm       ±0.07mm         42       1.2 (TX)       Half Hard       35       ±10%       ±0.06mm       ±0.11mm         42       1.5 (TY)       Hard       53       ±10%       ±0.06mm       ±0.07mm         42       1.2 (LiteX)       Hard       33       ±15%       ±0.06mm       ±0.07mm         54       1.2 (LiteX)       Hard       27       ±10%       ±0.06mm       ±0.07mm         54       1.2 (TX)       Half Hard       27       ±10%       ±0.06mm       ±0.11mm         54       2.0 (TY)       Hard       25       ±10%       ±0.06mm       ±0.07mm         66.7       1.2 (TX)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       1.2 (TX)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76	22		Soft			± 0.05mm	Not applicable	
35								
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35	35							
42       1.0 (LiteX)       Hard       35       ±15%       ±0.06mm       ±0.07mm         42       1.2 (TX)       Half Hard       35       ±10%       ±0.06mm       ±0.11mm         42       1.5 (TY)       Hard       53       ±10%       ±0.06mm       ±0.07mm         54       1.2 (LiteX)       Hard       27       ±10%       ±0.06mm       ±0.11mm         54       1.2 (TX)       Hard       55       ±10%       ±0.06mm       ±0.07mm         54       2.0 (TY)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       1.2 (TX)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76.1       1.5 (TX)       Hard       29       ±15%       ±0.07mm       ±0.10mm         76.1       2.0 (TY)       Hard       39       ±15%       ±0.07mm       ±0.10mm         108       1.5 (TX)       Hard       20       ±15%       ±0.07mm       ±0.20mm         108       2.5 (TY)       Hard       34       ±15%       ±0.07mm       ±0.20mm         133       1.5 (TX)       Hard       16       ±15%       ±0.20mm       ±0.70mm         159	35							
42       1.2 (TX)       Half Hard       35       ±10%       ±0.06mm       ±0.11mm         42       1.5 (TY)       Hard       53       ±10%       ±0.06mm       ±0.07mm         54       1.2 (LiteX)       Hard       33       ±15%       ±0.06mm       ±0.07mm         54       1.2 (TX)       Half Hard       27       ±10%       ±0.06mm       ±0.11mm         54       2.0 (TY)       Hard       55       ±10%       ±0.06mm       ±0.07mm         66.7       1.2 (TX)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       2.0 (TY)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76.1       1.5 (TX)       Hard       29       ±15%       ±0.07mm       ±0.10mm         76.1       2.0 (TY)       Hard       39       ±15%       ±0.07mm       ±0.10mm         108       1.5 (TX)       Hard       20       ±15%       ±0.07mm       ±0.20mm         108       2.5 (TY)       Hard       16       ±15%       ±0.20mm       ±0.70mm         159       2.0 (TX)       Hard       18       ±15%       ±0.20mm       ±0.70mm	35	1.5 (TY)						
42       1.5 (TY)       Hard       53       ±10%       ±0.06mm       ±0.07mm         54       1.2 (LiteX)       Hard       33       ±15%       ±0.06mm       ±0.07mm         54       1.2 (TX)       Half Hard       27       ±10%       ±0.06mm       ±0.11mm         54       2.0 (TY)       Hard       55       ±10%       ±0.06mm       ±0.07mm         66.7       1.2 (TX)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       2.0 (TY)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76.1       1.5 (TX)       Hard       39       ±15%       ±0.07mm       ±0.10mm         108       1.5 (TX)       Hard       20       ±15%       ±0.07mm       ±0.20mm         108       2.5 (TY)       Hard       34       ±15%       ±0.07mm       ±0.20mm         133       1.5 (TX)       Hard       16       ±15%       ±0.20mm       ±0.70mm         159       2.0 (TX)       Hard       18       ±15%       ±0.20mm       ±0.70mm	42			35				
54       1.2 (LiteX)       Hard       33       ±15%       ±0.06mm       ±0.07mm         54       1.2 (TX)       Half Hard       27       ±10%       ±0.06mm       ±0.11mm         54       2.0 (TY)       Hard       55       ±10%       ±0.06mm       ±0.07mm         66.7       1.2 (TX)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       2.0 (TY)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76.1       1.5 (TX)       Hard       39       ±15%       ±0.07mm       ±0.10mm         108       1.5 (TX)       Hard       20       ±15%       ±0.07mm       ±0.20mm         108       2.5 (TY)       Hard       34       ±15%       ±0.07mm       ±0.20mm         133       1.5 (TX)       Hard       16       ±15%       ±0.20mm       ±0.70mm         159       2.0 (TX)       Hard       18       ±15%       ±0.20mm       ±0.70mm				35				
54       1.2 (TX)       Half Hard       27       ±10%       ±0.06mm       ±0.11mm         54       2.0 (TY)       Hard       55       ±10%       ±0.06mm       ±0.07mm         66.7       1.2 (TX)       Hard       26       ±15%       ±0.07mm       ±0.10mm         66.7       2.0 (TY)       Hard       45       ±15%       ±0.07mm       ±0.10mm         76.1       1.5 (TX)       Hard       29       ±15%       ±0.07mm       ±0.10mm         76.1       2.0 (TY)       Hard       39       ±15%       ±0.07mm       ±0.10mm         108       1.5 (TX)       Hard       20       ±15%       ±0.07mm       ±0.20mm         108       2.5 (TY)       Hard       34       ±15%       ±0.07mm       ±0.20mm         133       1.5 (TX)       Hard       16       ±15%       ±0.20mm       ±0.70mm         159       2.0 (TX)       Hard       18       ±15%       ±0.20mm       ±0.70mm	42							
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76.1     2.0 (TY)     Hard     39     ±15%     ±0.07mm     ±0.10mm       108     1.5 (TX)     Hard     20     ±15%     ±0.07mm     ±0.20mm       108     2.5 (TY)     Hard     34     ±15%     ±0.07mm     ±0.20mm       133     1.5 (TX)     Hard     16     ±15%     ±0.20mm     ±0.70mm       159     2.0 (TX)     Hard     18     ±15%     ±0.20mm     ±0.70mm				45				
108     1.5 (TX)     Hard     20     ±15%     ± 0.07mm     ±0.20mm       108     2.5 (TY)     Hard     34     ±15%     ± 0.07mm     ±0.20mm       133     1.5 (TX)     Hard     16     ±15%     ± 0.20mm     ±0.70mm       159     2.0 (TX)     Hard     18     ±15%     ± 0.20mm     ±0.70mm								
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159 2.0 (TX) Hard 18 ±15% ± 0.20mm ±0.70mm	108							
219 3.0 (IX) Hard 20 $\pm 15\%$ $\pm 0.60$ mm $\pm 1.50$ mm	159							
	219	3.U (TX)	Hard	20	±15%	± U.6Umm	±1.50mm	

Working pressures are to BS 2871:part1:1971

