



QUICK TIPS

Birmingham Gauge Converter

Inch Equiv to mm	Inch Fraction	Thickness mm	BG	Inch Equiv to BG
0.397	3/8	10.0	0	0.3964
0.3543		9.0	1	0.3532
0.3150	5/16	8.0	2	0.3147
0.2756		7.0	3	0.2804
0.2632	1/4	6.0	4	0.2500
0.2165		5.5	5	0.2225
0.1969	3/16	5.0	6	0.1981
0.1772		4.5	7	0.1764
0.1575	5/32	4.0	8	0.1570
0.1378		3.5	9	0.1398
0.1181	1/8	3.0	10	0.1250
0.1102		2.8	11	0.1113
0.0984	3/32	2.5	12	0.0991
0.0866		2.2	13	0.0882
0.0787	5/64	2.0	14	0.0785
0.0709		1.8	15	0.0699
0.0630	1/16	1.6	16	0.0625
0.5510		1.4	17	0.0556
0.0472	3/64	1.2	18	0.0495
0.0433		1.1	19	0.0440
0.0394		1.0	20	0.0392
0.0354		0.90	21	0.0349
0.0315	1/32	0.80	22	0.0313
0.0276		0.70	23	0.0278
0.0236		0.60	24	0.0248
0.0217		0.55	25	0.0220
0.0197		0.50	26	0.0196
0.0177		0.45	27	0.0175
0.0157	1/64	0.40	28	0.0156
0.0138		0.35	29	0.0139
0.0118		0.30	30	0.0123
0.0110		0.28	31	0.0110
0.0098		0.25	32	0.0098
0.0087		0.22	33	0.0087
0.0079		0.20	34	0.0077
0.0071		0.18	35	0.0069
0.0063		0.16	36	0.0061
0.0055		0.14	37	0.0054
0.0047		0.12	38	0.0048
0.0043		0.11	39	0.0043
0.0039		0.10	40	0.0039

Quick Tips

To Calculate the mass of steel circular hollow sections (as used in Australian Standards AS 1163)

Circular sections

$$\text{Mass} = (\text{OD} - w t) \times w t \times 0.0246615.$$

where: Mass = mass/metre (kg/m)
 OD = outside diameter (mm)
 w t = section thickness (mm)

To Calculate the mass of steel plate sections

$$\text{Mass} = t \times 7.850 \times (L \times W)$$

where: Mass = mass/metre² (kg/m)
 t = thickness of plate (mm)
 L = length of plate (m)
 W = width of plate (m)

To calculate the mass for Floorplate add 2 kg/M²**To Calculate the mass of Flats, Squares & Rounds**

Flats: Width (mm x Thickness (mm) x 0.00785 = kg/m.

Squares: Size (mm²) x 0.00785 = kg/m.Rounds: Dia: (mm²) x 0.006165 = kg/m.**To determine the length of a conveyer belting**

Measure in inches from the outside of the roll to the opposite side of the centre opening (S). Count the number of layers of turns of belt (N).

C is constant = 0.2618

$$L = S \times N \times C (0.2618) = \text{Length in feet}/3.28 = \text{metres.}$$

eg: -26" x 61 x 0.2618 = 415.22 divide by 3.28 = 126.6m

Australian Standards

Standard	Relevance
AS 1074	Steel tube and tubulars for ordinary service.
AS 1163	Structural steel hollow sections.
AS 1722.1	Pipe threads of whitworth form.
AS/NZS 4792	Hot-dip galvanised (zinc) coatings on hollow sections, applied by continuous or specialised process.
AS 1396	Steel tube for water bore casing.
AS/NZS 3679.1	Structural steel - Hot rolled bars & sections.
AS/NZS 3678	Steel Hot rolled plates & floor plates.
AS 1397	Steel sheet & strip - Hot dipped zinc coated or aluminium/zinc coated
AS 2423	Chain wire mesh for fencing.
AS 1303	Steel reinforcing wire for concrete
AS 4100	Steel structures
AS 1657	Balltube handrail system