

AS/NZS 1163

RECTANGULAR HOLLOW SECTIONS

Nominal Sizes		Wall Thickness (t)		Mass per unit length		Pieces / bdl's	Nominal Sizes		Wall Thickness (t)		Kg / Mtr	lb/Ft	Pieces / bdl's									
Inch	NB (mm)	Inch	mm	Kg / Mtr	lb/Ft		Inch	NB (mm)	Inch	mm												
2 X 3/4	50 X 20	0.063	1.6	1.63	1.095	100	4 X 2	100 X 50	0.079	2.0	4.50	3.024	36									
		0.079	2.0	1.99	1.337	100			0.098	2.5	5.56	3.737	30									
		0.098	2.5	2.42	1.626	64			0.118	3.0	6.60	4.435	25									
		0.118	3.0	2.83	1.902	64			0.138	3.5	7.53	5.060	25									
2 X 1	50 X 25	0.063	1.6	1.75	1.176	100			0.157	4.0	8.49	5.706	25	0.197	5.0	10.30	6.922	20				
		0.079	2.0	2.15	1.445	100			0.236	6.0	12.00	8.065	20	0.118	3.0	8.96	6.022	24				
		0.098	2.5	2.62	1.761	64			0.157	4.0	1.60	7.796	20	0.197	5.0	14.2	9.543	16				
		0.118	3.0	3.07	2.063	64			0.079	2.0	6.07	4.08	21	0.098	2.5	7.53	5.06	21				
2 9/16 X 1 3/8	65 X 35	0.063	1.6	2.38	1.599	64			6 X 2	150 X 50	0.098	2.5	3.60	2.419	49	0.118	3.0	8.96	6.02	21		
		0.079	2.0	2.93	1.969	64					0.157	4.0	1.63	7.82	15	0.197	5.0	14.24	9.57	15		
		0.098	2.5	3.60	2.419	49					0.236	6.0	16.74	1.25	15	0.098	2.5	7.53	5.06	21		
		0.118	3.0	4.25	2.856	49					0.157	4.0	14.8	9.95	16	0.118	3.0	8.96	6.02	21		
3 X 1	75 X 25	0.079	2.0	3.72	2.500	49	6 X 4	150 X 100			0.197	5.0	18.2	12.23	12	0.236	6.0	21.4	14.38	12		
		0.098	2.5	4.58	3.078	36					0.157	4.0	17.9	12.03	12	0.197	5.0	22.1	14.85	9		
		0.118	3.0	5.42	3.642	36					0.236	6.0	26.20	17.61	9	0.354	9.0	37.70	25.34	6		
		0.157	4.0	6.92	4.651	25					0.197	5.0	29.90	20.09	6	0.236	6.0	35.60	23.92	4		
3 X 2	75 X 50	0.063	1.6	2.73	1.835	50					8 X 4	200 X 100	0.157	4.0	21.4	14.38	12	0.197	5.0	22.1	14.85	9
		0.079	2.0	3.37	2.265	56							0.236	6.0	26.20	17.61	9	0.354	9.0	37.70	25.34	6
		0.098	2.5	4.15	2.789	45							0.197	5.0	29.90	20.09	6	0.236	6.0	35.60	23.92	4
		0.118	3.0	4.90	3.293	40							0.354	9.0	51.8	34.81	4					
3 X 1 1/2	76 X 38	0.157	4.0	6.23	4.187	32			10 X 6	250 X 150			0.197	5.0	29.90	20.09	6	0.236	6.0	35.60	23.92	4
		0.063	1.6	2.38	1.599	64			0.354	9.0			51.8	34.81	4							
		0.079	2.0	2.93	1.969	64																
		0.098	2.5	3.60	2.419	49																

Color marked sizes can also be manufactured in Pre-Galvanized with zinc coating Z275 (275gm/m²)

TOLERANCES FOR SHAPE AND MASS:

CHARACTERISTICS	SQUARE HOLLOW SECTIONS
EXTERNAL DIMENSIONS (d and b)	± 1 %, with a minimum of ±0.5 mm
THICKNESS (T)	± 10%
CONCAVITY/CONVEXITY	Max. 0.8% or 0.5mm, Whichever is greater
SQUARENESS OF SIDES	90° ± 1°
EXTERNAL CORNER PROFILE	Perimeter (mm) Equivalent to 50X50 or less : 1.5 t to 3.0 t Equivalent to greater than 50X50 : 1.8 t to 3.0 t
TWIST	2.0+ 0.5 mm/m length
STRAIGHTNESS	0.15% of total length
MASS (m) PER UNIT LENGTH	Not less than 0.96 times the specified mass on individual Length

CHEMICAL COMPOSITION:

GRADE	Chemical composition % max.												
	C	Si	Mn	P	S	Cr	Mo	Al	Ni	Cu	Ti	Microalloying Elements	CE
C 250, C250L0	0.12	0.05	0.50	0.03	0.03	0.15	0.10	0.10	0.25	0.25	0.04	0.03 (Note-1)	0.25
C 350, C350L0	0.20	0.45	1.60	0.03	0.03	0.30	0.10	0.10	0.25	0.25	0.04	0.15 (Note-2)	0.43
C 450, C450L0	0.20	0.45	1.70	0.03	0.03	0.50	0.35	0.10	0.25	0.25	0.04	0.15 (Note-2)	0.43

Note-1) Nb - 0.010 Max Note-2) V - 0.10 Max.

Carbon Equivalent : Carbon equivalent shall be calculated from the following formula.

$$CEV = C + (Mn / 6) + (Cr + Mo + V) / 5 + (Ni + Cu) / 15$$

MECHANICAL PROPERTIES:

GRADE	Min. Yield Strength Reh(Mpa)	Tensile Strength Rm(Mpa)	Elongation %	Test Temp	Min. Impact Energy (J)					
					Size of Test piece					
					10 X 10 mm		10 X 7.5 mm		10 X 5.0 mm	
					Average of 3 tests	Individual Test	Average of 3 tests	Individual Test	Average of 3 tests	Individual Test
C 250/C250L0	250	320	18	0 °C	27	20	22	16	18	13
C 350/C350L0	350	430	16							
C450/C450L0	450	500	14							