NMSS METAL

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INTRODUCTION

NMSS, a name steadily surging ahead in the field of Interior, Roof and Wall Cladding Market and becoming synonymous to this industry, Located at New Industrial Area in Ajman, having inhouse state of the art manufacturing facilities which provides Roof & Wall Cladding System, Comprising of Profile corrugated sheets, Dry Wall partition system since 2009. Agressively expanding its products horizon, by closely understanding the existing market demand and needs of its consumers in the competitive market conditions.

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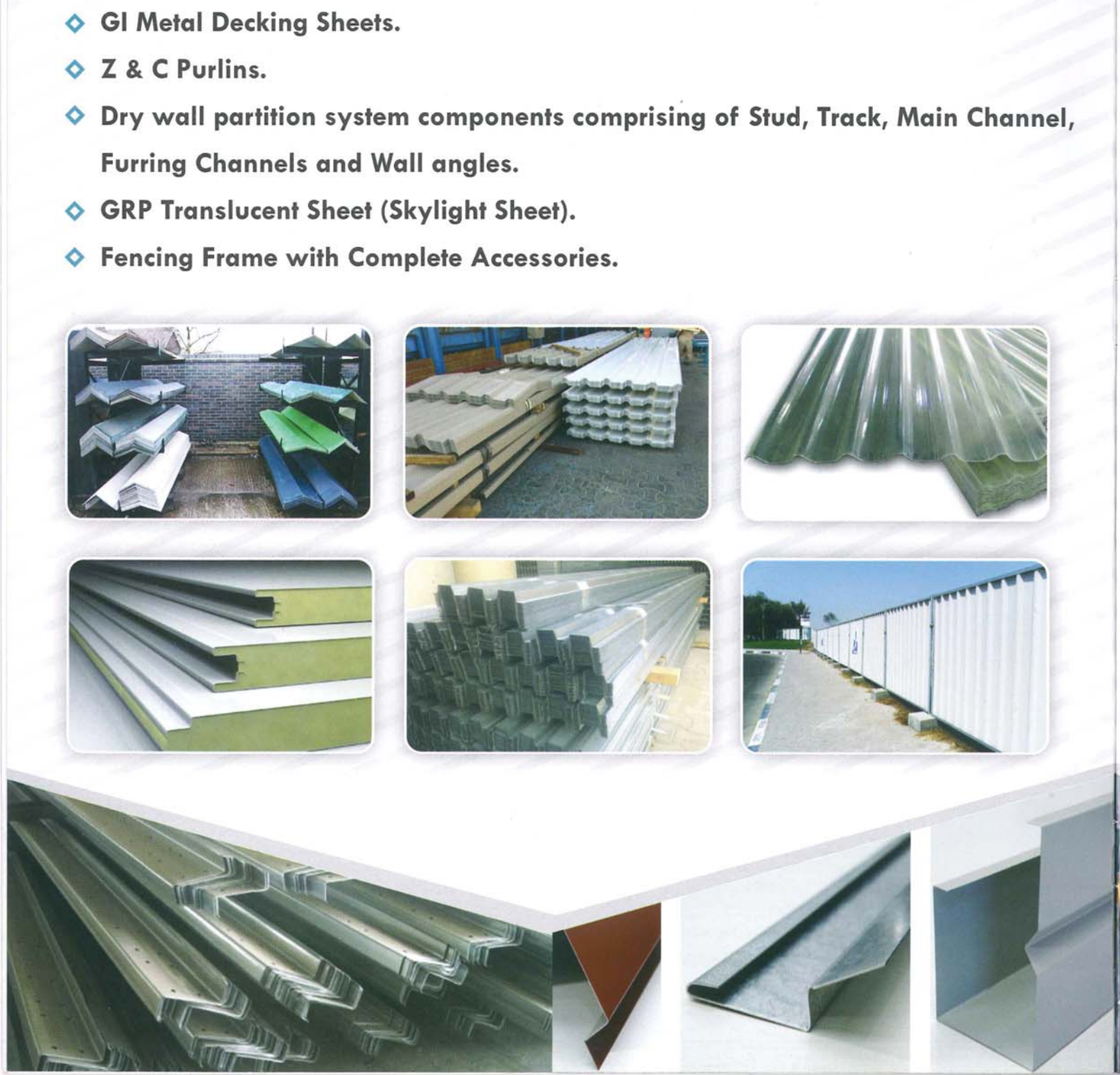
Product Range:

- Aluminium and Steel Corrugated profile Sheets, Ridges & its accessories.
- Insulated Roof & Wall panels, Cold Room Panels & its accessories.
- Flashing, Rain Gutter, Ridge Ventilators, Sliding & Hinged Doors. Fire Doors etc.
- GI Metal Decking Sheets.
- Z & C Purlins.
- Dry wall partition system components comprising of Stud, Track, Main Channel, Furring Channels and Wall angles.
- GRP Translucent Sheet (Skylight Sheet).
- Fencing Frame with Complete Accessories.









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35/200 Corrugated Roof & Wall Cladding Sheet (Cover Width 1000mm)

This Trapezoidal Sheet has a generous edge for a double-lap weather proof seal for roofing.
The low, wide trapezoidal ribs resist crushing and encourage smooth water flow.
The 1000 mm version is ideal for sliding or an inexpensive, single lap roof sheet.
The closely spaced rib pattern casts an attractive, even shadow line.

Raw Materials.

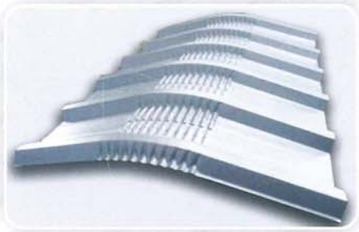
A) Galvanized or Alu-zinc coated steel. Either in Mill finish or in polyester coated.
Base Metal conforming To ASTM A653, Commerical Grade or Equivalent

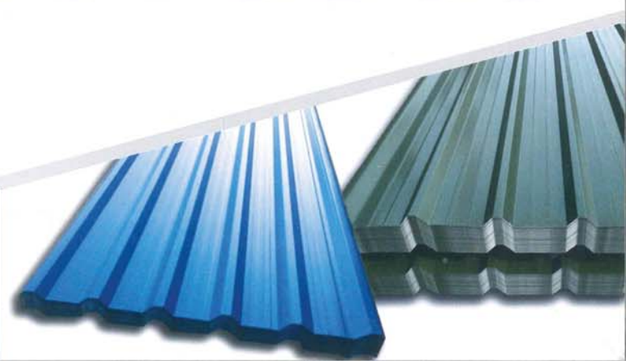
B) Aluminium plain or Stucco Embossed either in Mill finish or in Polyester coated.
Alloy - 3105, Temper H-16 or Equivalent

Standard Colors:

- RAL 9002 OFFWHITE
- RAL 5012 BLUE
- RAL 1001 BEIGE
- BS12 B21 EMIRATES GREEN

Also available in Non-standard colors on request

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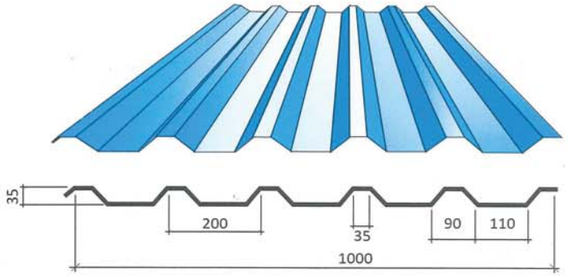
35/200 Corrugated Roof & Wall Cladding Sheet (Cover Width 1000mm), Aluminium



35/200 Profiled Aluminium Sheeting - Properties & Load Tables

- Material : Alloy AA3105, H16 (Fy=18.0 KN/cm²)."
- Aluminium Sheets available in Polyester Colour coated, RAL 9002, RAL 5012, RAL 1001, BS12B21 etc.
- Paint applied is Polyester coated 20 to 25 microns on the exposed surface and 5 to 7 microns epoxy on inner surface. Colours available as per RAL colour chart (Subject to the availability).

Section Properties (per meter of coverage width)

Thickness	Weight	Area	Top in compression				Bottom in compression				Shear
mm	Kg/m²	cm²	1x cm⁴	Sx Top cm³	Sx Bottom cm³	Ma KN - m	1 x cm⁴	Sx Topcm³	Sx Bottom cm³	Ma KN - m	Va KN
0.50	1.65	6.90	8.85	3.60	8.24	0.39	8.25	4.66	4.68	0.50	5.10
0.60	1.98	7.31	11.68	4.95	9.90	0.53	10.25	5.64	5.95	0.61	8.80
0.70	2.31	8.53	14.56	6.36	11.59	0.69	12.30	6.62	7.28	0.71	12.81
0.80	2.65	9.75	17.12	7.56	13.28	0.81	14.41	7.61	8.69	0.82	14.88
0.90	2.98	10.97	19.71	8.79	14.95	0.95	16.57	8.59	10.16	0.93	16.64
1.00	3.31	12.19	22.29	10.02	16.62	1.08	18.77	9.57	11.69	1.03	18.38

Allowable Uniform Load Capacities (KN/m²)

Thickness	No. of Spans	Load	Span in Meters								
mm	No's	Case	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.50	Upto 2 spans	D+L	3.11	1.99	1.38	1.01	0.78	0.61	0.49	0.37	0.28
		Uplift	4.02	2.57	1.78	1.31	1.00	0.79	0.64	0.52	0.40
	3 or more spans	D+L	3.88	2.48	1.73	1.27	0.97	0.77	0.62	0.51	0.43
		Uplift	5.02	3.21	2.23	1.64	1.26	0.99	0.80	0.66	0.56
0.60	Upto 2 spans	D+L	4.26	2.73	1.90	1.39	1.07	0.84	0.65	0.49	0.38
		Uplift	4.86	3.11	2.16	1.59	1.22	0.96	0.78	0.64	0.49
	3 or more spans	D+L	5.33	3.41	2.37	1.74	1.33	1.05	0.85	0.70	0.59
		Uplift	6.08	3.89	2.70	1.99	1.52	1.20	0.97	0.80	0.68
0.70	Upto 2 spans	D+L	5.48	3.51	2.44	1.79	1.37	1.08	0.81	0.61	0.48
		Uplift	5.71	3.66	2.54	1.87	1.43	1.13	0.91	0.76	0.59
	3 or more spans	D+L	6.85	4.38	3.04	2.24	1.71	1.35	1.10	0.91	0.76
		Uplift	7.14	4.57	3.17	2.33	1.79	1.41	1.14	0.94	0.79
0.80	Upto 2 spans	D+L	6.51	4.17	2.89	2.13	1.63	1.29	0.95	0.71	0.55
		Uplift	6.56	4.20	2.92	2.14	1.64	1.30	1.05	0.87	0.69
	3 or more spans	D+L	8.14	5.21	3.62	2.66	2.04	1.61	1.30	1.08	0.90
		Uplift	8.20	5.25	3.64	2.68	2.05	1.62	1.31	1.08	0.91
0.90	Upto 2 spans	D+L	7.58	4.85	3.37	2.48	1.90	1.50	1.09	0.82	0.63
		Uplift	7.41	4.74	3.29	2.42	1.85	1.46	1.19	0.98	0.80
	3 or more spans	D+L	9.48	6.07	4.21	3.10	2.37	1.87	1.52	1.25	1.05
		Uplift	9.26	5.93	4.12	3.02	2.32	1.83	1.48	1.22	1.03
1.00	Upto 2 spans	D+L	8.63	5.52	3.84	2.82	2.16	1.70	1.24	0.93	0.72
		Uplift	8.26	5.28	3.67	2.70	2.06	1.63	1.32	1.09	0.91
	3 or more spans	D+L	10.79	6.91	4.80	3.52	2.70	2.13	1.73	1.43	1.20
		Uplift	10.32	6.60	4.59	3.37	2.58	2.04	1.65	1.36	1.15

Notes :
1. Design of Sheeting is based on equations of AISI -2001 (ASD - Allowable Stress design)
2. D+L = Dead + Live Load (Deflection Limitation: Span / 180)
3. Wind Uplift (Deflection Limitation : Span / 120)

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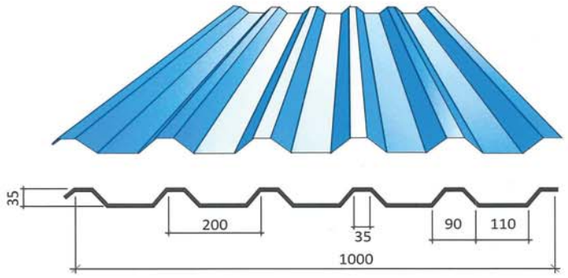
35/200 Corrugated Roof & Wall Cladding Sheet (Cover Width 1000 mm) GI



35/200 Profiled Steel Sheeting (GI) - Properties & Load Tables

- Material : Alloy A653, Commercial Grade : LFQ
- Sheets available in Mill finish and Polyester colour coated (GI).
- Paint applied is Polyester coated 20 to 25 microns on the exposed surface and 5 to 7 microns epoxy on inner surface. Colours available as per RAL colour chart (Subject to the availability).

Section Properties (per meter of coverage width)

Thickness	Weight	Area	Top in compression				Bottom in compression				Shear
mm	Kg/m²	cm²	1x cm⁴	Sx Top cm³	Sx Bottom cm³	Ma KN - m	1 x cm⁴	Sx Topcm³	Sx Bottom cm³	Ma KN - m	Va KN
0.40	3.82	4.88	7.00	2.83	6.63	0.94	6.83	3.78	3.96	1.26	11.51
0.46	4.40	5.61	8.64	3.60	7.65	1.20	8.06	4.38	4.77	1.46	17.55
0.50	4.78	6.10	9.80	4.16	8.33	1.38	8.90	4.79	5.32	1.59	22.52
0.60	5.73	7.31	12.64	5.54	10.04	1.84	11.05	5.79	6.76	1.93	33.36
0.70	6.69	8.53	15.24	6.77	11.77	2.25	13.25	6.80	8.29	2.26	38.70

Allowable Uniform Load Capacities (KN/m²)

Thickness	No. of Spans	Load	Span in Meters								
mm	No's	Case	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.40	Upto 2 spans	D+L	6.08	3.11	1.80	1.13	0.76	0.53	0.39	0.29	0.23
		Uplift	8.89	4.55	2.63	1.66	1.11	0.78	0.57	0.43	0.33
	3 or more spans	D+L	9.42	5.87	3.40	2.14	1.43	1.01	0.73	0.55	0.42
		Uplift	12.58	8.05	4.97	3.13	2.10	1.47	1.07	0.81	0.62
0.46	Upto 2 spans	D+L	7.50	3.84	2.22	1.40	0.94	0.66	0.48	0.36	0.28
		Uplift	10.50	5.37	3.11	1.96	1.31	0.92	0.67	0.50	0.39
	3 or more spans	D+L	11.97	7.25	4.19	2.64	1.77	1.24	0.91	0.68	0.52
		Uplift	14.58	9.33	5.87	3.70	2.48	1.74	1.27	0.95	0.73
0.50	Upto 2 spans	D+L	8.51	4.36	2.52	1.59	1.06	0.75	0.54	0.41	0.32
		Uplift	11.59	5.93	3.43	2.16	1.45	1.02	0.74	0.56	0.43
	3 or more spans	D+L	13.84	8.22	4.76	3.00	2.01	1.41	1.03	0.77	0.59
		Uplift	15.91	10.18	6.48	4.08	2.73	1.92	1.40	1.05	0.81
0.60	Upto 2 spans	D+L	10.97	5.62	3.25	2.05	1.37	0.96	0.70	0.53	0.41
		Uplift	14.38	7.36	4.26	2.68	1.80	1.26	0.92	0.69	0.53
	3 or more spans	D+L	18.42	10.60	6.13	3.86	2.59	1.82	1.32	1.00	0.77
		Uplift	19.26	12.33	8.04	5.06	3.39	2.38	1.74	1.30	1.00
0.70	Upto 2 spans	D+L	13.22	6.77	3.92	2.47	1.65	1.16	0.85	0.64	0.49
		Uplift	17.25	8.83	5.11	3.22	2.16	1.51	1.10	0.83	0.64
	3 or more spans	D+L	22.49	12.77	7.39	4.66	3.12	2.19	1.60	1.20	0.92
		Uplift	22.61	14.47	9.64	6.07	4.07	2.86	2.08	1.56	1.21

Notes :
1. Design of Sheeting is based on equations of AISI -2001 (ASD - Allowable Stress design)
2. D+L = Dead + Live Load (Deflection Limitation: Span / 180)
3. Wind Uplift (Deflection Limitation : Span / 120)

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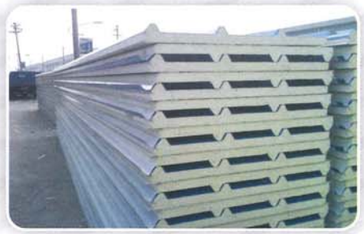
SANDWICH PANELS

Sandwich Panels are used as Roof panels for Shopping Mall, School, Labour Camps and any type of buildings. They are also used in industrial sheds, prefab houses and portable cabin and also used for cold rooms like freezer and chiller.
Sandwich panels are light weight and cost effective and easy to transport and installation.

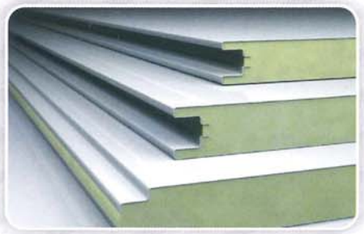
Sandwich panels are made when three separate elements are sandwiched together to form one structure i.e. Top Skin + Inslation core + liner
Top Skin: Aluminium or GI Polyster coated sheets
Insulation: Polyurethane Foam with minimum density of 35 to 40 kgs/m3
Liner: Aluminium Foil or Aluminium / GI polyster coated shallow ribbe sheet

Sandwich panel main function is to protect the buildings from extreme hot and cold ambient temperature thus helping sheltering from environmental extreme conditions due to its very good insulation properties.

Profiled Sandwich panel:
Thickness can be 50 mm, 75 mm, 100 mm and 150 mm thick for corrugated roof and wall cladding.



Cold Room Panels:
Thickness can be 50 mm, 100 mm and 150 mm.



Sandwich Panel are produced in any customized lenght upto 12 meter

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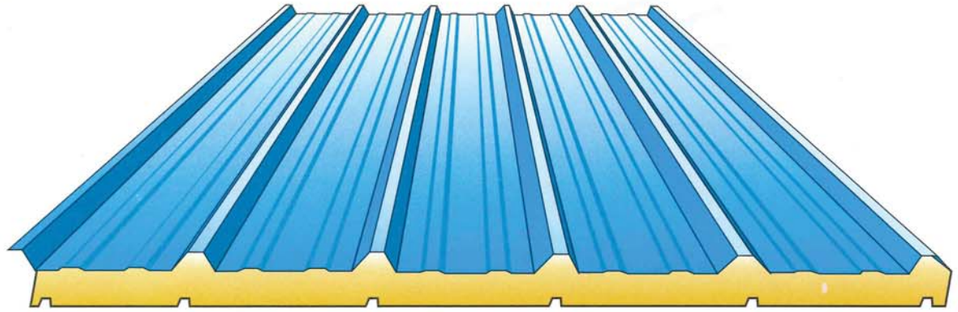
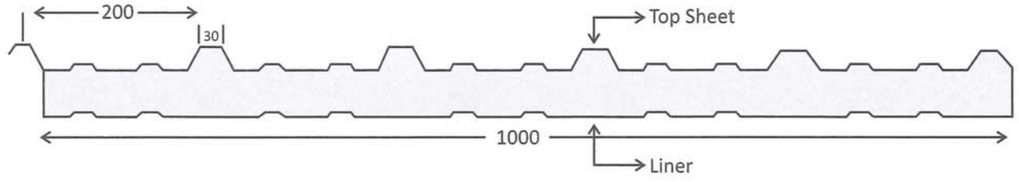




INSULATION THICKNESS		50		75		100	
		ALLOWABLE SPAN					
		Alum	Steel	Alum	Steel	Alum	Steel
TOP SHEET THICK	0.5	2425	2700	3000	3350	4100	4600
	0.6	2650	2900	3350	3600	4250	4850
	0.7	2800	3100	3500	3950	4400	5150
THERMAL CONDUCTIVITY		0.33		0.21		0.18	

GENERAL FEATURE

A) Mechanical Characteristics of the foam (At Overall Density of 35 - 37 kg/m^3)

- Tensile Stress : 150 kpa
- Compression resistance : 100 kpa
- Shear resistance : 100 kpa
- Fire property : B3 as per DIN 4102 (B2 upon Request)

B) Insulation Capacity

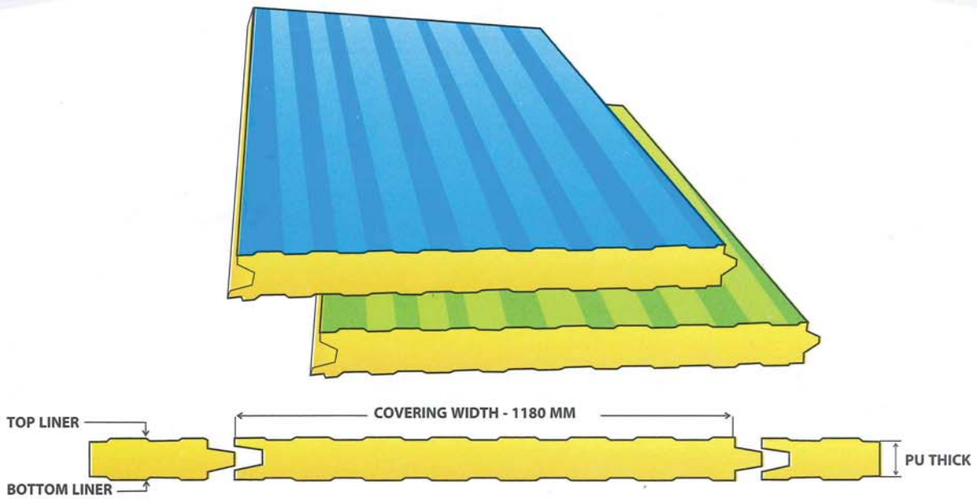
- K value (Thermal Conductivity of PU) - 0.022 W/mK
- Tolerance + / - 0.002

C) Water absorption of the foam

- After 24 hours : 1.0% of Volume

Pu Thickness	w/m^2
25 mm	0.76
35 mm	0.54
50 mm	0.38
75 mm	0.29
100 mm	0.19

APPLICATION
Roof and Wall Cladding



INSULATION THICKNESS		50		100	
		ALLOWABLE SPAN			
		Alum	Steel	Alum	Steel
TOP SHEET THICK	0.5	2625	3125	3725	4425
	0.6	3025	3820	4275	5350
	0.7	3225	3975	4525	5575
THERMAL CONDUCTIVITY		0.41		0.21	

GENERAL FEATURE

A) Mechanical Characteristics of the foam (At Overall Density of 35 - 37 kg/m³)

- Tensile Stress : 150 kpa
- Compression resistance : 100 kpa
- Shear resistance : 100 kpa
- Fire property : B3 as per DIN 4102 (B2 upon Request)

B) Insulation Capacity

- K value (Thermal Conductivity of PU) - 0.022 W/mK
- Tolerance + / - 0.002

C) Water absorption of the foam

- After 24 hours : 1.0% of Volume

Pu Thickness	w/m²
25 mm	0.76
35 mm	0.54
50 mm	0.38
75 mm	0.29
100 mm	0.19

APPLICATION
Wall and various cold room applications

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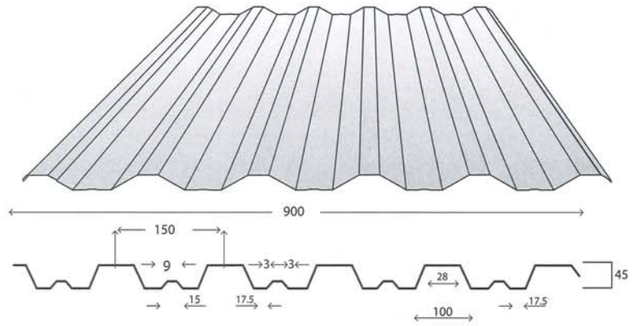
Profile Sheet 45/150



NMSS - 45/150 Profiled Steel Sheeting (GI) - Properties & Load Tables

- Material : ASTM A653, Grade : 50 (Fy=35.0 KN/cm²).
- Sheets available in Mill Finish and Colour coated.
- Paint applied is Polyester coated 25 to 30 microns on the exposed surface and 5 to 7 microns epoxy on inner surface.
- Colours available as per NMSS RAL colour chart (Subject to the availability).

Section Properties (per meter of coverage width)

Thickness	Weight	Area	Top in compression				Bottom in compression				Shear
mm	Kg/m²	cm²	I x cm⁴	Sx Top cm³	Sx Bottom cm³	Ma KN - m	I x cm⁴	Sx Topcm³	Sx Bottom cm³	Ma KN - m	Va KN
0.50	5.31	6.77	18.58	7.40	9.20	2.46	18.85	8.10	8.56	2.69	23.72
0.60	6.37	8.13	22.97	9.28	11.13	3.09	23.17	9.78	10.69	3.25	41.03
0.70	7.43	9.48	27.41	11.23	13.04	3.73	27.51	11.46	12.84	3.81	60.06
0.80	8.50	10.84	31.74	13.10	14.92	4.13	31.70	13.10	14.89	4.13	74.12
0.90	9.56	12.19	35.58	14.67	16.69	4.62	35.58	14.67	16.69	4.62	83.18
1.00	10.62	13.54	39.38	16.22	18.44	5.11	39.38	16.22	18.44	5.11	92.19

Allowable Uniform Load Capacities (KN/m²)

Thickness	No. of Spans	Load	Span in Meters								
mm	No's	Case	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.50	Upto 2 spans	D+L	16.12	8.26	4.78	3.01	2.02	1.42	1.03	0.78	0.60
		Uplift	21.54	12.56	7.27	4.58	3.07	2.15	1.57	1.18	0.91
	3 or more spans	D+L	24.59	15.58	9.01	5.68	3.80	2.67	1.95	1.46	1.13
		Uplift	26.92	17.23	11.97	8.64	5.79	4.06	2.96	2.23	1.71
0.60	Upto 2 spans	D+L	19.93	10.20	5.91	3.72	2.49	1.75	1.28	0.96	0.74
		Uplift	26.02	15.45	8.94	5.63	3.77	2.65	1.93	1.45	1.12
	3 or more spans	D+L	30.87	19.25	11.14	7.02	4.70	3.30	2.41	1.81	1.39
		Uplift	32.52	20.81	14.45	10.62	7.12	5.00	3.64	2.74	2.11
0.70	Upto 2 spans	D+L	23.79	12.18	7.05	4.44	2.97	2.09	1.52	1.14	0.88
		Uplift	30.47	18.34	10.61	6.68	4.48	3.14	2.29	1.72	1.33
	3 or more spans	D+L	37.33	22.98	13.30	8.38	5.61	3.94	2.87	2.16	1.66
		Uplift	38.09	24.38	16.93	12.44	8.45	5.93	4.32	3.25	2.50
0.80	Upto 2 spans	D+L	27.55	14.10	8.16	5.14	3.44	2.42	1.76	1.32	1.02
		Uplift	33.00	21.12	12.23	7.70	5.16	3.62	2.64	1.98	1.53
	3 or more spans	D+L	41.28	26.42	15.40	9.70	6.50	4.56	3.33	2.50	1.93
		Uplift	41.26	26.40	18.34	13.47	9.73	6.84	4.98	3.74	2.88
0.90	Upto 2 spans	D+L	30.87	15.81	9.15	5.76	3.86	2.71	1.98	1.48	1.14
		Uplift	36.97	23.66	13.72	8.64	5.79	4.07	2.96	2.23	1.72
	3 or more spans	D+L	46.21	29.58	17.26	10.87	7.28	5.11	3.73	2.80	2.16
		Uplift	46.21	29.58	20.54	15.09	10.92	7.67	5.59	4.20	3.24
1.00	Upto 2 spans	D+L	34.17	17.50	10.13	6.38	4.27	3.00	2.19	1.64	1.27
		Uplift	40.88	26.16	15.19	9.56	6.41	4.50	3.28	2.46	1.90
	3 or more spans	D+L	51.10	32.70	19.10	12.03	8.06	5.66	4.13	3.10	2.39
		Uplift	51.10	32.70	22.71	16.69	12.09	8.49	6.19	4.65	3.58

Notes : 1. Design of Sheeting is based on equations of AISI -2001 (ASD - Allowable Stress design).
2. D+L = Dead + Live Load (Deflection Limitation: Span / 180)
3. Wind Uplift (Deflection Limitation : Span / 120)

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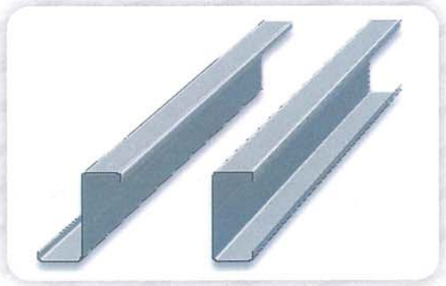
Z & C Purlins

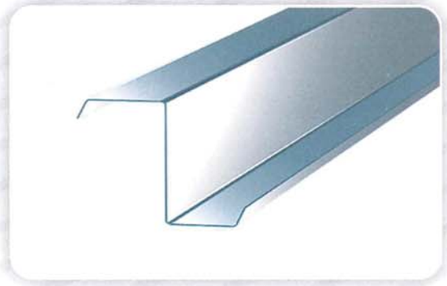
Z-Purlin feature one broad and one narrow flange allowing the two sections to fit together snugly, making them suitable for lapping Z sections of the same depth and different thickness can be lapped if any combination. Purlins and girts that are lapped form a structurally continuous line along the length of the building, a factor that contributes significantly to the reduction in building costs.

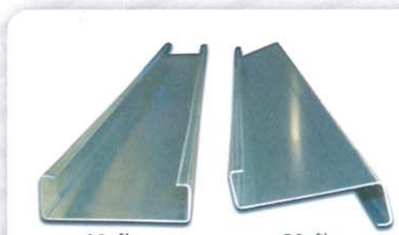
C-Purlin have equal flanges and may be used in single spans and unlapped continuous spans in multi-bay building. Their freestanding stable shape allows easy handling and storage and is easily adapted for use in small and medium sized buildings as structural framework.

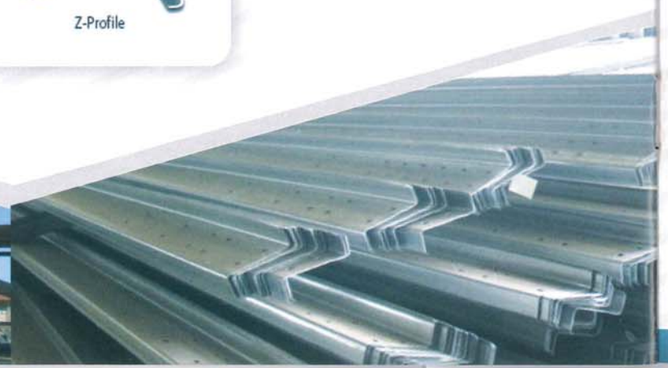
Materials : Z Purlin and C - Purlin are roll - formed from a Galvanized, high strength, steel strip Conforming to ASTH A653, Grade D structural quality

Standard base steel thickness: 1.5mm, 2mm, 2.5mm and 3mm









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Z - SECTION PROPERTIES AND ALLOWABLES

Material: Grade: ASTM A653, Grade:50, EN-10147, S350, GD Z275, G90 (Fy=350 N/mm2)																			
SECTION		142Z15	142Z20	172Z15	172Z20	202Z15	202Z20	202Z25	232Z15	232Z20	232Z25	250Z20	250Z25	262Z20	262Z25	302Z25	302Z30	342Z25	342Z30
Depth	D mm	142	142	172	172	202	202	202	232	232	232	250	250	262	262	302	302	342	342
Thickness	t mm	1.5	2.0	1.5	2.0	1.5	2.0	2.5	1.5	2.0	2.5	2.0	2.5	2.0	2.5	2.5	3.0	2.5	3.0
Top Flange	W_{tf} mm	60	60	65	65	65	65	65	76	76	76	80	80	80	80	90	90	100	100
Bot. Flange	W_{bf} mm	55	55	60	60	60	60	60	69	69	69	72	72	72	72	82	82	92	92
Lip	L mm	16	16	16	16	16	16	16	16	16	16	16	16	16	16	18	18	18	18
Lip Angle	Deg	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Bend Radius	R mm	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0
Weight	W kg/m	3.33	4.44	3.81	5.10	4.12	5.49	6.86	4.78	6.37	7.96	6.71	8.39	6.90	8.63	9.79	11.73	10.97	13.14
Area	A mm^2	421.82	558.19	481.82	638.19	526.82	698.19	865.30	601.82	798.19	990.30	848.19	1052.80	872.19	1082.80	1247.30	1491.80	1397.30	1671.80
Ixx	cm^4	135.26	177.34	221.87	291.55	322.76	424.67	521.59	487.09	641.96	790.24	786.90	969.52	878.84	1083.18	1661.13	1978.11	2377.02	2823.95
Sxx (t)	cm^3	19.39	25.43	26.20	34.43	32.41	42.65	52.39	42.73	56.32	69.34	64.15	79.05	68.33	84.23	111.79	133.12	141.01	168.06
Sxx (b)	cm^3	18.72	24.54	25.41	33.38	31.51	41.46	50.92	41.28	54.40	66.95	61.80	76.13	65.89	81.20	108.29	128.95	137.06	163.35
Rx	cm	5.66	5.64	6.79	6.76	7.83	7.80	7.76	9.00	8.97	8.93	9.63	9.60	10.04	10.02	11.54	11.52	13.04	13.02
Iyy	cm^4	36.06	47.09	44.26	57.93	44.26	57.94	71.01	64.34	84.40	103.67	95.30	117.14	95.31	117.15	171.05	202.50	227.48	269.63
Syy (l)	cm^3	5.39	7.07	6.17	8.10	6.18	8.11	9.98	7.94	10.44	12.87	11.34	13.99	11.35	13.99	17.99	21.35	21.65	25.72
Syy (r)	cm^3	5.20	6.82	5.95	7.82	5.94	7.81	9.60	7.57	9.95	12.26	10.75	13.26	10.75	13.25	17.13	20.33	20.70	24.59
Ry	cm	2.92	2.90	3.03	3.01	2.90	2.88	2.87	3.27	3.25	3.24	3.35	3.34	3.31	3.29	3.70	3.68	4.04	4.02
Allowable Shear	Vu KN	14.92	29.89	12.17	29.21	10.28	24.62	46.70	8.90	21.28	42.29	19.68	39.05	18.74	37.15	31.56	54.73	27.75	48.09
Allowable BM*	M_{ag} KN-m	3.35	4.72	4.45	6.08	5.46	7.60	10.31	6.25	9.75	12.55	10.93	13.88	11.66	14.84	19.48	23.61	22.76	28.15
Allowable bm**	M_{awc} KN-m	3.12	4.40	4.14	5.66	5.09	7.07	9.60	5.82	9.07	11.68	10.18	12.93	10.86	13.82	18.14	21.98	21.19	26.21
Allowable BM$	M_{aws} KN-m	2.23	3.14	2.96	4.04	3.63	5.05	6.86	4.16	6.48	8.35	7.27	9.23	7.76	9.87	12.96	15.70	15.13	18.72
Ultimate Shear	Vu KN	22.42	44.92	18.29	43.90	15.45	37.00	70.19	13.37	31.98	63.56	29.57	58.69	28.16	55.84	47.44	82.26	41.71	72.29
Ultimate BM*	M_{ug} KN-m	5.32	7.49	7.05	9.64	8.67	12.05	16.36	9.92	15.46	19.91	17.34	22.03	18.50	23.55	30.91	37.45	36.10	44.66
Ultimate BM**	M_{uwc} KN-m	4.95	6.98	6.57	8.98	8.07	11.22	15.23	9.23	14.40	18.54	16.15	20.51	17.23	21.92	28.78	34.87	33.61	41.58
Ultimate BM $	M_{uws} KN-m	3.54	4.98	4.69	6.41	5.76	8.02	10.88	6.59	10.28	13.24	11.53	14.65	12.30	15.66	20.56	24.90	24.01	29.708

C - SECTION PROPERTIES AND ALLOWABLES

Material: Grade: ASTM A653, Grade:50, EN-10147, S350, GD Z275, G90 (Fy=350 N/mm2)															
SECTION		C1421.5	C1422.0	1C1721.5	C1722.0	C2021.5	C2022.0	C2321.5	C2322.0	C2622.0	C2622.5	C3022.5	C3023.0	C3422.5	C3423.0
Depth	D mm	142	142	172	172	202	202	232	232	262	262	302	302	342	342
Thickness	t mm	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	2.0	2.5	2.5	3.0	2.5	3.0
Top Flange	W_{tf} mm	55	55	60	60	69	69	69	69	80	80	80	80	89	89
Bot. Flange	W_{bf} mm	55	55	60	60	69	69	69	69	80	80	80	80	89	89
Lip	L mm	15	15	15	15	15	15	15	15	15	15	15	15	18	18
Lip Angle	Deg	90	90	90	90	90	90	90	90	90	90	90	90	90	90
I. Bend Radius	R mm	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	2.0	2.5	2.5	3.0	2.5	3.0
Weight	W kg/m	3.2	4.3	3.7	4.9	4.3	5.7	4.6	6.2	7.0	8.7	9.5	11.3	10.7	12.8
Area	A mm^2	414.00	548.00	474.00	628.00	546.00	724.00	591.00	784.00	888.00	1105.00	1205.00	1440.00	1365.00	1632.00
Ixx	cm^4	118.43	161.92	192.22	261.14	288.42	392.16	386.19	545.96	776.37	981.79	1384.15	1716.55	2001.47	2459.51
Sxx (t)	cm^3	15.87	22.32	21.11	29.31	26.04	36.35	29.62	44.27	54.86	70.60	86.76	110.21	109.79	138.10
Sxx (b)	cm^3	17.58	23.31	23.75	31.50	31.61	41.66	38.00	50.23	64.44	79.87	97.16	117.38	125.32	150.06
Rx	cm	5.60	5.57	6.72	6.69	7.88	7.85	8.91	8.87	10.06	10.02	11.36	11.32	12.87	12.83
Iyy	cm^4	16.60	21.28	21.76	27.96	32.12	41.44	33.41	43.10	64.55	78.33	81.34	94.70	117.24	137.03
Syy (l)	cm^3	10.07	12.93	13.03	16.78	17.47	22.58	19.63	25.34	33.30	40.46	45.60	53.13	58.70	68.64
Syy (r)	cm^3	4.31	5.52	5.02	6.45	6.35	8.118	6.43	8.29	10.65	12.92	13.08	15.23	16.98	19.85
Ry	cm	2.02	1.99	2.16	2.13	2.44	2.41	2.39	2.36	2.71	2.68	2.62	2.59	2.95	2.92
Ultimate Shear	Vu KN	21.92	44.92	17.96	43.10	15.21	36.43	13.19	31.55	27.83	54.78	47.28	82.26	41.58	72.29
Ultimate BM*	M_{ug} KN-m	5.28	7.85	7.02	9.74	8.66	12.09	9.85	14.72	18.24	23.47	28.85	36.64	36.51	45.92
Ultimate BM**	M_{uwc} KN-m	4.91	7.31	6.53	9.07	8.06	11.25	9.17	13.71	16.98	21.85	26.86	34.11	33.99	42.75
Ultimate BM $	M_{uws} KN-m	3.51	5.22	4.67	6.48	5.76	8.04	6.55	9.79	12.13	15.61	19.18	24.37	24.28	30.53

*BM due to gravity loads (fully braced) **BM due to uplift continuous spans (fully braced) $ BM due to uplift for simple spans (fully braced)

NMSS METAL
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Standard Flashings

NMSS Metal offers customers a variety of standard trims that provide a seamless finished look and style to the cladding of their pre-engineered building. Those most commonly used are illustrated below. Trims are made from the same materials as standard NMMS Metal Panels and available in all NMSS Metal Panel colors.

INNER RIDGE FLASHING

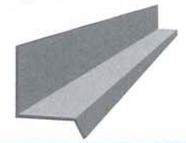
GABLE FLASHING

CORNER FLASHING

CAP FLASHING

DRIP FLASHING - 1

DRIP FLASHING - 2



ANGLE FLASHING

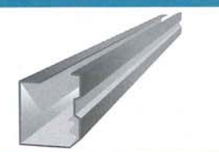
APRON FLASHING

Roof Drainage Components

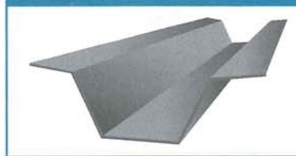
EAVE GUTTER - 1

EAVE GUTTER - 2

EAVE GUTTER - 3



VALLEY GUTTER



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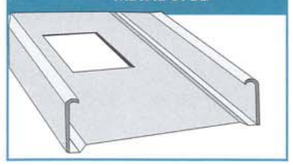
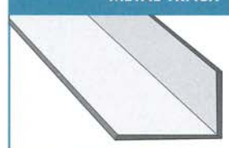
Dry Wall Partition Systems

METAL STUD



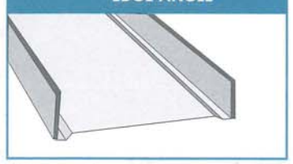
50mm, 63mm,
70mm, 92mm, 123mm

METAL TRACK



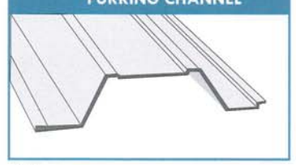
25mm X 25mm

EDGE ANGLE



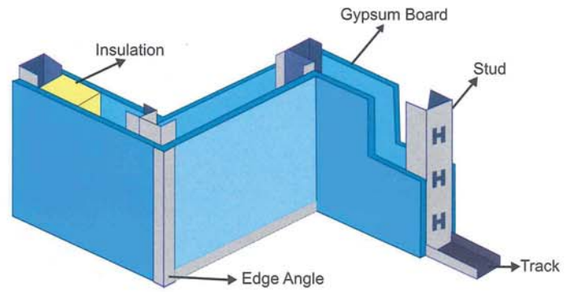
52mm, 65mm,
72mm, 94mm, 125mm

FURRING CHANNEL



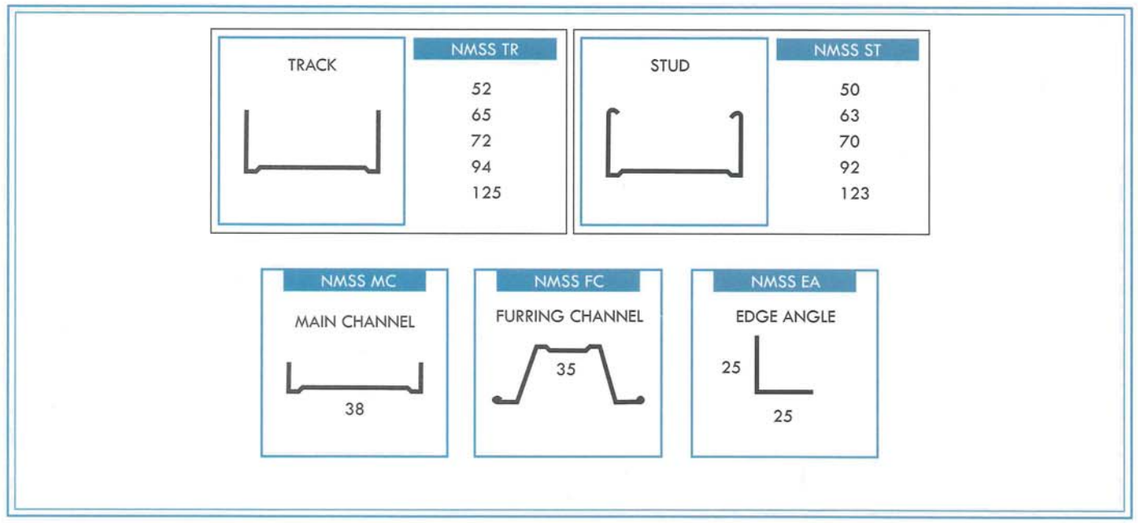
35mm

Material:
GI Mill Finish. 0.40 mm to 1 mm



Assembled Partition

Quick Selector Chart (Partition and Ceiling)



All above sections are available in standard of 3M
however, we can supply in any required length and thickness

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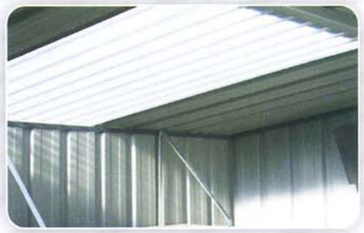
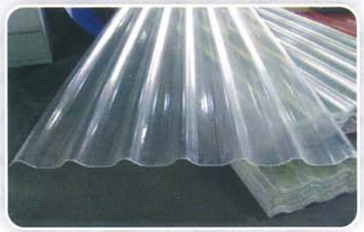
Composite Skylite Panels

Where to use?

The Translucent skylight panels are an ideal solution for virtually free lighting inside warehouses, industrial sheds or any enclosed buildings during daytime. Skylights can also have valuable applications in places such as restaurants, transportation centres and public areas to provide a sense of natural ambience. They are generally installed on roofs but can be fixed vertically along the walls too.





Advantages

- It renders considerable savings on electricity bills during daytime.
- Provides diffused light with maximum illumination
- Can be manufactures to suit any profile, shape or size
- Highly resistant to shattering unlike glass
- Higher strength to weight ratio
- Easy to install
- Virtually maintenance free(occasional cleaning recommended).

Area required for Skylights

For Midde East conditions where sunlight is available almost throughout the year, only 4 - 6% of root area needs to be accounted for skylight panels.

Skylight Configurations

Our composite skylilght can be moulded into any desired shapes such as flat or profiled panels, domes or pyramids, ets.
The Construction can be single-layered or double-layered depending on insulation requirements.

Standard Product Ranges

Thickness (mm)	1, 1.5, 2, 3 & 4
Length	1 m to 5 m
Colour Tints	Clear, Blue, Green & Opal

Basic Product Features

Tensile strength	: 85 N/mm²
Flexural strength	: 140 N/mm²
Impact Strength,4J	: 75 mJ/mm²
Shear strength	: 70 N/mm²
Elastic Modulus	: 8000 N/mm²
Flexural Modulus	: 6000 N/mm²
Hardness (Barcol)	: 40
Thermal conductivity	: 0.145 W/mK
Thermal expansion coefficient	: 24 x 10.6 m/°C
Heat transmission factor	: 0.25 k cal/m. h. °C
Operating Temperature	: -20°C to +90°C
Water absorption	: 0.3% by mass after 24hrs. at 22/°C
Transmission of Light	: Varies between 65% - 80% with thickness & colour

CAUTION: Skylight are generally unsuitable for foot traffic but be specially made to meet this requirement.

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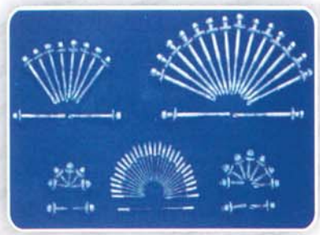
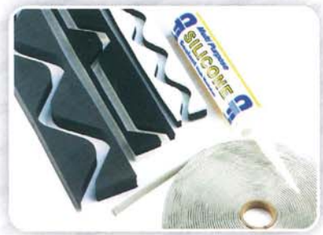
FIXING ACCESSORIES

Various hardware items required for the erection and finishing of your NMSS Steel Engineered Building are supplied for your convenience. Here are just a few items that are commonly used.



Fasterners

Nuts & Bolts



Sealants & Closures

Hillside Washers

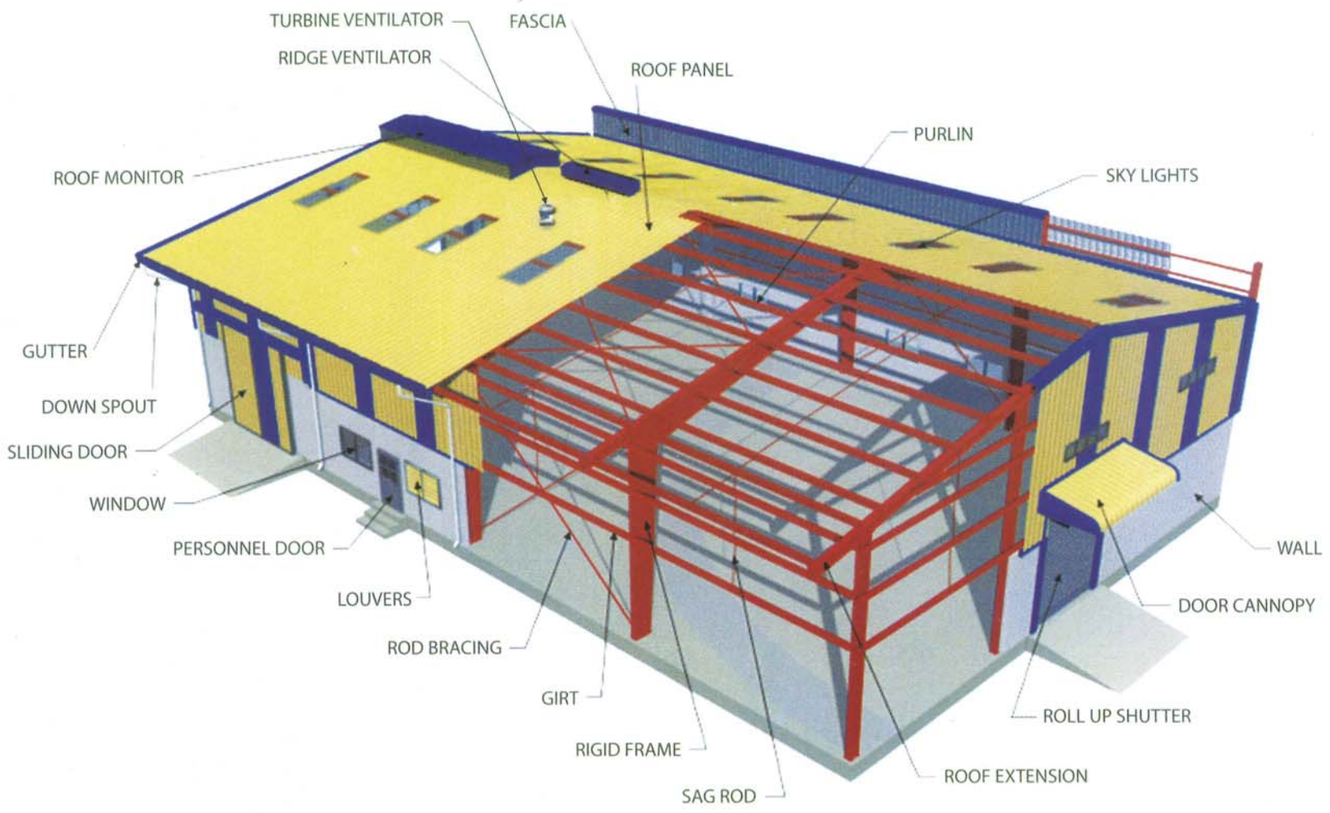
Anchor Bolts

Pop Rivets

Purine Tape

Butly Inseal Tape

SDS/STS Screws (GI or SS)



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