Frigipan (Pty) Ltd
Plot 251 Van Der Hoff Rd, Zandfontein 317-JR
Pretoria, 0030
012 752 8765 · info@frigipan.co.za · www.frigipan.co.za

Panel Specifications

PANEL SPECIFICATION

INSULATION SOLUTIONS

Width	Length	Skin	Adhesive	Finish	Colour
1000 mm and 1165 mm	To order Min. 2000mm* Max. 12000mm	AluZinc coated steel with a corrosion inhibitive primer baked onto surface with durable top coat. 0,35mm, 0.4mm, 0.5mm & 0.6mm thickness. Mill test certificate can be supplied at request.	Two component polyurethane	Flat, Mesa Micro Groove 130 IBR Roof	Frost White
Non-standard metals, colours and paint types may be negotiated subject to quantity and time considerations. *If shorter panels are required we will supply the panels in double length. Customer to cut.					

JOINT DETAIL

Frigipan Panels' unique tongue and groove interlocking detail provides easy & effective joint installation. This uniquely designed system incorporates a male and female joint on each steel face that provides a rigid and sealed connection between adjacent panels. The tightness and quality of the joint resists deformity in fire situations, provides a weather tight seal and enables effective and easy installation.

POLYSTYRENE CORE BUTT JOINTS

The butt joints between the ends of the polystyrene core material have been made by way of finger jointing providing a mechanical bond across the end faces of the core material. The finger joints at the butt joints of the polystyrene core material occur every 4 metres.

HEAT TRANSFER COEFFICIENTS (EPS)

Heat Transfer Coefficients (EPS)												
Thickness (mm)		40	50	75	100	125	150	175	200	225	250	300
"U" Value W / (m² °C)		0.95	0.76	0.51	0.38	0.30	0.25	0.22	0.19	0.17	0.15	0.13
		Q = Heat Transmission in W/m²										
Temperature Difference (Inside to outside of Room)	10	9.50	7.60	5.07	3.80	3.04	2.53	2.17	1.90	1.69	1.52	1.27
	15	14.25	11.40	7.60	5.70	4.56	3.80	3.26	2.85	2.53	2.28	1.90
	20	19.00	15.20	10.13	7.60	6.08	5.07	4.34	3.80	3.38	3.04	2.53
	25	23.75	19.00	12.67	9.50	7.60	6.33	5.43	4.75	4.22	3.80	3.17
	30	28.50	22.80	15.20	11.40	9.12	7.60	6.51	5.70	5.07	4.56	3.80
	35	33.25	26.60	17.73	13.30	10.64	8.87	7.60	6.65	5.91	5.32	4.43
	40	38.00	30.40	20.27	15.20	12.16	10.13	8.69	7.60	6.76	6.08	5.07
	45	42.75	34.20	22.80	17.10	13.68	11.40	9.77	8.55	7.60	6.84	5.70
	50	47.50	38.00	25.33	19.00	15.20	12.67	10.86	9.50	8.44	7.60	6.33
	55	52.25	41.80	27.87	20.90	16.72	13.93	11.94	10.45	9.29	8.36	6.97
	60	57.00	45.60	30.40	22.80	18.24	15.20	13.03	11.40	10.13	9.12	7.60
	65	61.75	49.40	32.93	24.70	19.76	16.47	14.11	12.35	10.98	9.88	8.23
	70	66.50	53.20	35.47	26.60	21.28	17.73	15.20	13.30	11.82	10.64	8.87
	75	71.25	57.00	38.00	28.50	22.80	19.00	16.29	14.25	12.67	11.40	9.50
	80	76.00	60.80	40.53	30.40	24.32	20.27	17.37	15.20	13.51	12.16	10.13
	85	80.75	64.60	43.07	32.30	25.84	21.53	18.46	16.15	14.36	12.92	10.77
	90	85.50	68.40	45.60	34.20	27.36	22.80	19.54	17.10	15.20	13.68	11.40
	95	90.25	72.20	48.13	36.10	28.88	24.07	20.63	18.05	16.04	14.44	12.03
	100	95.00	76.00	50.67	38.00	30.40	25.33	21.71	19.00	16.89	15.20	12.67

- Allow an additional 50mm thickness for walls and roofs exposed to direct sunlight.
- Consideration should be given to insulating floor detail.
- Values are guides only.

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Panel Specifications

PANEL PERFORMANCE DATA

INSULATION SOLUTIONS

PANEL WEIGHT (kg/m²) - EPS (SD)

Metal Thickness (mm)	EPS Thickness (mm)										
0.4	7.22	7.38	7.78	8.18	8.58	8.98	9.38	9.78	10.18	10.58	11.38
0.5	8.79	8.95	9.35	9.75	10.15	10.55	10.95	11.35	11.75	12.15	12.95
0.6	10.36	10.52	10.92	11.32	11.72	12.12	12.52	12.92	13.32	13.72	14.52

PANEL WEIGHT (kg/m²) - EPS (HD)

Metal Thickness (mm)	EPS Thickness (mm)										
0.4	7.54	7.78	8.38	8.98	9.58	10.18	10.78	11.38	11.98	12.58	13.78
0.5	9.11	9.35	9.95	10.55	11.15	11.75	12.35	12.95	13.55	14.15	15.35
0.6	10.68	10.92	11.52	12.12	12.72	13.32	13.92	14.52	15.12	15.72	16.92

STRUCTURAL LOAD SPAN

Maximum allowable loads kN/m²																			
Insulation / Type		Panel Thickness (mm)		Span in Meters — Wall									Max Span Internal (m)	Span in Meters — Ceiling					Max Span Walk-on Ceiling (m)
SD	50	0.76	0.42	0.25							3.76	0.65	0.32						2.61	
HD	50	0.93	0.48	0.28							3.96	0.83	0.38						3.14	
SD	75	1.34	0.79	0.49	0.32						4.97	1.24	0.68	0.39					4.12	
HD	75	1.71	0.95	0.56	0.35						5.15	1.61	0.85	0.46					4.61	
SD	100	1.96	1.20	0.78	0.52	0.37	0.26				6.13	1.85	1.09	0.67	0.41	0.26			5.34	
HD	100	2.59	1.49	0.92	0.60	0.40	0.28				6.31	2.48	1.38	0.81	0.49	0.29			6.00	
SD	125	2.60	1.53	0.98	0.68	0.50	0.38	0.29		7.00	2.49	1.63	0.87	0.57	0.39	0.27			6.16	
HD	125	3.50	2.08	1.32	0.87	0.60	0.42	0.32		7.37	3.39	1.97	1.21	0.76	0.49	0.31			7.13	
SD	150	3.25	1.84	1.17	0.81	0.60	0.46	0.36	0.29	7.71	3.14	1.73	1.07	0.71	0.49	0.35	0.25		6.89	
HD	150	4.45	2.72	1.75	1.18	0.83	0.59	0.44	0.34	8.38	4.33	2.60	1.63	1.06	0.71	0.39	0.26		8.25	
SD	175	3.82	2.14	1.37	0.95	0.70	0.53	0.42	0.34	8.27	3.70	2.03	1.26	0.84	0.59	0.42	0.31	0.23	7.56	
HD	175	5.42	3.18	2.03	1.41	1.04	0.77	0.57	0.43	9.50	5.30	3.06	1.91	1.29	0.92	0.65	0.45	0.31	9.28	
SD	200	4.36	2.45	1.57	1.09	0.80	0.61	0.48	0.39	8.85	4.24	2.33	1.45	0.97	0.68	0.49	0.37	0.27	8.19	
HD	200	6.40	3.64	2.33	1.62	1.19	0.91	0.72	0.56	10.38	6.27	3.51	2.20	1.49	1.06	0.78	0.59	0.43	10.30	
SD	225	4.91	2.76	1.77	1.23	0.90	0.69	0.54	0.44	9.40	4.79	2.64	1.65	1.11	0.78	0.57	0.43	0.32	8.75	
HD	225	7.25	4.10	2.62	1.82	1.34	1.03	0.81	0.66	11.07	7.11	3.96	2.49	1.69	1.21	0.89	0.68	0.51	11.00	
SD	250	5.46	3.06	1.96	1.36	1.00	0.76	0.60	0.49	9.91	5.33	2.94	1.84	1.24	0.88	0.64	0.48	0.37	9.31	
HD	250	8.09	4.55	2.91	2.02	1.49	1.14	0.90	0.76	11.86	7.95	4.41	2.77	1.88	1.35	1.00	0.76	0.59	11.70	

• Spans are indicative only and apply to wall and roof profiles using 0.5 BMT steel, specific site conditions need to be calculated by an Engineer.

• Minimum support width of panel is 50mm.

• Ceiling panels complying to BS 6399 “Walk-on Ceilings”, design to accommodate a distribution load of 0.25KN/m² + centre load of 0.9kN.

• Safety factor used – 1.5 live load. 1.35 dead load. Deflection limit is controlled by L/240

Description	Tolerance
Panel length ≤ 3 m	± 3mm
Panel length is > 3 m ≤ 8 m	± 5mm
Panel length is > 8 m ≤ 12 m	± 7mm
Panel width	± 2 mm
Panel thickness	± 2 mm
Panel bow	(Δ1 + Δ2) / 2 ≤ 1 mm / m