

20mm Technical Data Sheet

Grand View's honeycomb panel, Alucomb, is constructed with lightweight hexagonal shape of honeycomb cores between two sturdy aluminum sheets. With Grand View's progressive technology, up to 10 meters of panels can be produced each time with the patented Automatic Manufacturing Facility (AMF) machine. With this innovation, Alucomb is constructed via one of the most advanced technology in the industry.

Application

- Commercial building wall cladding
- Soffit and fascia panels
- Curtain wall façade

Physical Properties

- Weight: 4.6kg/m² @ 10mmT
- Specific Gravity: 1.2

Specification

- Panel Total Thickness: 6 ~ 200 mm thick
- Composition: Aluminum + Honeycomb Core + Aluminum
- Standard Width: 1,250 mm (1,575 mm available)
- Standard Length: Within 7,000 mm
- Surface Finish: Aluminum and other metal sheets
- Tolerance Width: ±2.0 mm
- Length: ±2.0 mm
- Thickness: +0.2 mm

Dimension Specification

1. Thickness	-	mm	20.0
2. Front Skin Thickness, F	-	mm	1.0
3. Rear Skin Thickness, R	-	mm	1.0
4. Standard Core	-	-	¼", other available
5. Weight	-	kg/m ²	7.4
6. Standard Width	-	mm	1020, 1250, 1575
7. Minimum/ Maximum Length	-	mm	1500 / 8000
8. Thickness Tolerance	-	mm	±0.2

Mechanical Specification

1. Flatwise Strength	ASTM C 297	MPa	≥1.0
2. Flatwise Compressive Strength	ASTM C 365	MPa	≥2.0
3. Flexural Strength	ASTM C 393	MPa	≥10
4. T-Peel Strength	ASTM D 1876	N/50mm	≥100
5. Acoustic Reduction, Rw	ISO 717-1	Db	23
6. Thermal Resistance	ASTM E 1461	m ² K/W	0.0089
7. Thermal Conductivity	ASTM E 1461	W/Mk	2.25
8. Temperature Stability		°C	-20 ~ +70

Aluminum Skin Sheet Specification

1. Aluminum Alloy Grade	ASTM B 209	-	5005
2. Temper of Aluminum	ASTM B 209	H	12
3. Tensile Strength	ASTM B 209	N/mm ²	Rm > 125
4. Elasticity Modulus	ASTM D 638	N/mm ²	70,000
5. 0.2% Proof Stress	ASTM B 209	N/mm ²	Rp 0.2 > 80
6. Elongation	ASTM B 209	%	A50 > 3
7. Linear Thermal Expansion	ASTM D 696	mm/m/100k	2.4 X 10 ⁻⁵

Aluminum Core Specification

1. Aluminum Alloy	ASTM B 209	-	3104
2. Temper of Aluminum	ASTM B 209	H	18
3. Tensile Strength	ASTM B 209	N/mm ²	≥ 205
4. Elasticity Modulus	ASTM D 638	N/mm ²	69,000
5. Elongation	ASTM B 209	%	≥ 1.0



Adhesive Specification

1. RoHS, Halogen	IEC 62321	-	N.D. (Not Detected)
2. LOI	ASTM D 2863	-	20.6

Fire Behaviour

1. Fire Propagation	BS 476, Part 6	-	Index 0
2. Surface Flame Spread	BS 476, Part 7	-	Class 1
3. Non Combustibility	ISO 1182	-	Class 1
4. Smoke Generation	ASTM E 662	-	Ds(1.5)=1 DS(4.0)=1 in flaming mode
		-	Ds(1.5)-1 Ds(4.0)=1 in non-flaming mode
5. Surface Flammability	ASTM E 162	-	Is = 5
6. NFPA 130	-	-	Passed