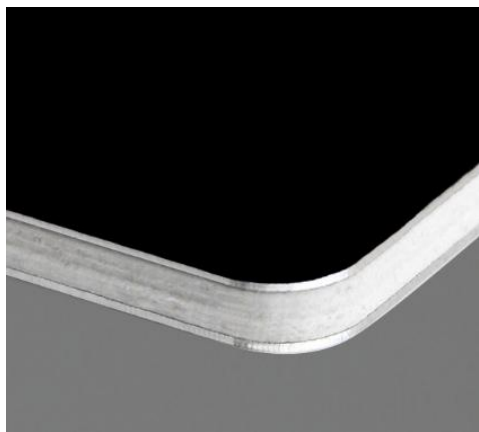


Technical Data Sheet (TDS)

Product Name: SKYPANEL B1 0.5/6mm (B1 Fire-Resistant Aluminum Composite Panel)



Product Description

This product is a 6mm thick aluminum composite panel with high-quality 0.5mm aluminum sheets on both sides and a B1 fire-retardant core, coated with PVDF finish. It provides excellent fire resistance, weather durability, mechanical strength, and aesthetic appearance, making it suitable for building facades, curtain walls, and high-end decorative applications.

1. Technical Specifications

- Total Thickness: 6mm
- Aluminum Skin Thickness: 0.5mm (front & back)
- Standard Width: 1220mm, 1500mm
- Length: Customized upon request
- Aluminum Alloy: 3003/1100 (H24)
- Core Material: B1 fire-retardant core
- Surface Coating: PVDF ($\geq 70\%$ fluorocarbon resin),

- Backside Coating: Primer painting
- Coating Thickness: $\geq 25\mu\text{m}$
- Color: Customized as per client requirements

2. Dimensional Tolerances

- Panel Thickness: $\pm 0.2\text{mm}$
- Aluminum Thickness: $\pm 0.02\text{mm}$
- Width: $\pm 2\text{mm}$
- Length: $\pm 3\text{mm}$
- Diagonal: $\leq 5\text{mm}$
- Warpage: $\leq 4\text{mm/m}$

3. Physical Properties

- Weight per Unit Area: $\sim 10.7 \text{ kg/m}^2$
- Thermal Conductivity (core): $0.20\text{--}0.35 \text{ W/m}\cdot\text{K}$
- Thermal Transmittance (U-Value): $< 4 \text{ W/m}^2\cdot\text{K}$ (estimated for the panel itself, including standard surface resistances)
- Thermal Expansion Coefficient: $2.4 \times 10^{-6} / ^\circ\text{C}$
- Heat Distortion Temperature: $\geq 95^\circ\text{C}$
- Water Absorption: $\leq 0.5\%$
- Corrosion Resistance: Excellent, suitable for outdoor use

4. Surface Coating Properties

- Weather Resistance: Excellent resistance to UV, rain, and environmental conditions, ensuring long-term color stability
- Chemical Resistance: Resistant to acids, alkalis, and common solvents
- Scratch Resistance: High hardness, suitable for high-traffic environments
- Color Fastness: Long-term resistance to fading under sunlight

- Stain Resistance: Smooth surface, easy to clean and maintain

5. Key Features

- Lightweight & High Strength: Reduces structural load while ensuring durability
- Fire Resistance: B1 fire-retardant core, compliant with building fire safety standards
- Weather Durability: PVDF coating ensures long-lasting outdoor performance
- Easy Processing: Suitable for sawing, grooving, bending, and drilling

6. Applications

- Medium- and high-rise building facades
- Curtain walls
- Public and commercial interior decoration
- Projects requiring fire resistance and durability

7. Installation Recommendations

- Ensure substrate is clean, dry, and flat
- Use compatible adhesives, aluminum profiles,

and fasteners

- Follow relevant local building codes and standards

8. Storage & Handling

- Store in dry, ventilated areas; avoid direct sunlight and high humidity
- Protect panels from impact and surface scratches during transportation

9. Warranty

- This product is supplied with a 15-year warranty, subject to manufacturer's warranty policy

10. Data Notes & Disclaimer

The above performance parameters are typical values for reference only. Actual performance may vary depending on raw material batches, testing methods, and installation conditions.

The manufacturer reserves the right to make technical improvements and update product data without prior notice.