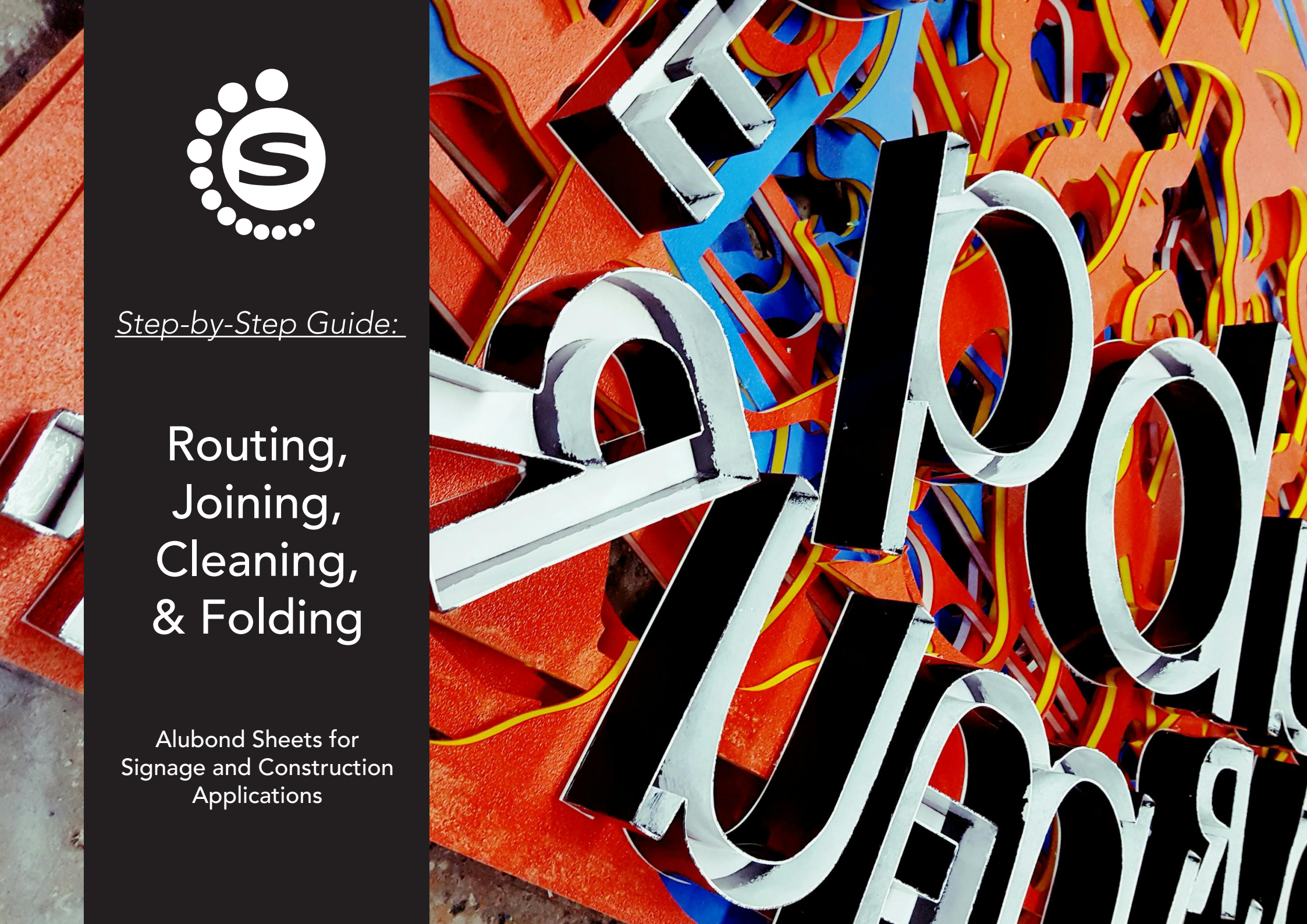
Step-by-Step Guide:

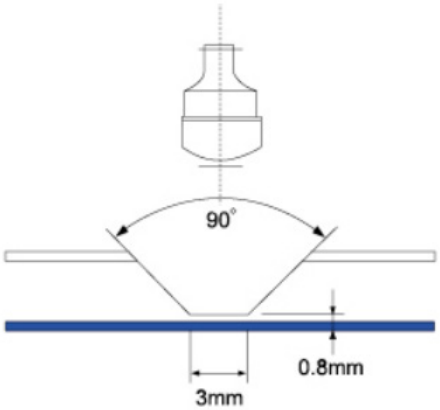
Routing, Joining, Cleaning, & Folding

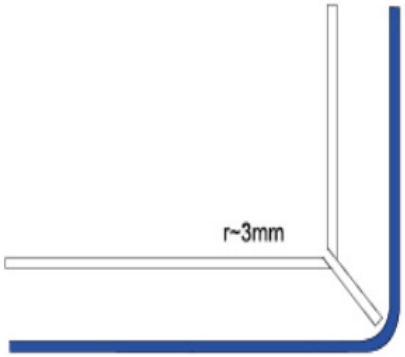
Alubond Sheets for Signage and Construction Applications



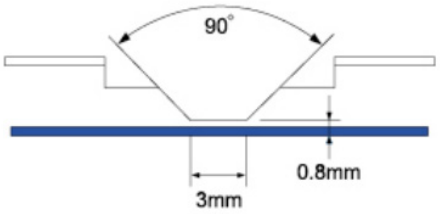
Routing and Folding

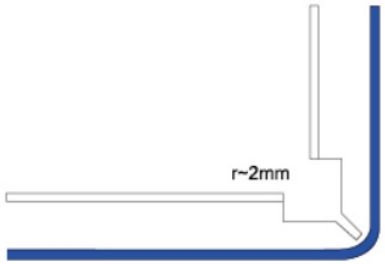
1. V-shape for folding up to 90°



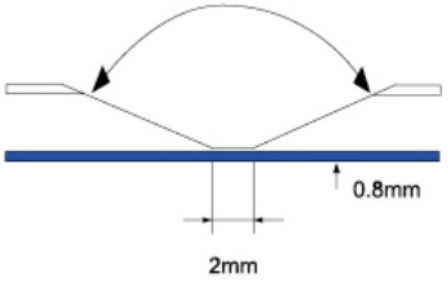


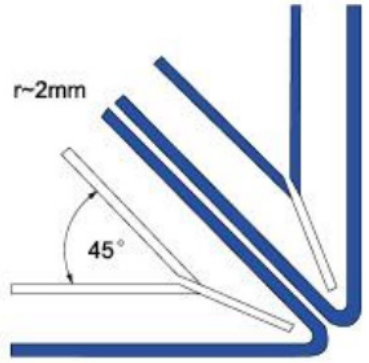
2. V-shape with flat area for folding up to 90°





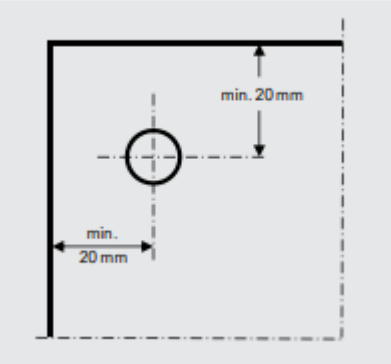
3. V-shape for folding up to 135°



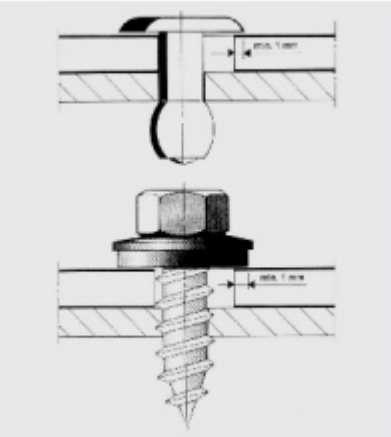


4. Rectangular groove for folding up to 150°, depends on the panel thickness.

Joining Method



Distance from the edge


Overlapping the hole edge

General

To prevent stress on rivet and screw connections, all fasteners must be installed without tension. The panel boreholes should be sized adequately to accommodate thermal expansion. Alubond panels have a linear thermal expansion of approximately 2.4 mm per meter of panel length for every 100°C temperature change.

Material	Linear thermalexpansion coefficient α_T (m/°C)	Expansion at 1 m panel length/ width and 50°C temp. difference
PVC	~ 70 x 10^{-6}	3.5 mm
CBOND	24 x 10^{-6}	1.2 mm
Aluminium	24 x 10^{-6}	1.2 mm
Steel	12 x 10^{-6}	0.6 mm
Concrete	12 x 10^{-6}	0.6 mm
Wood	5 x 10^{-6}	0.25 mm

The panel may reach a maximum temperature of approximately 70°C (measured on a black panel at an ambient air temperature of 40°C).

Example:
- Panel size: 1 m × 3 m
- Maximum panel heating: 70 °C
- Assembly temperature: 20 °C
- Temperature difference (Δt): 50 °C

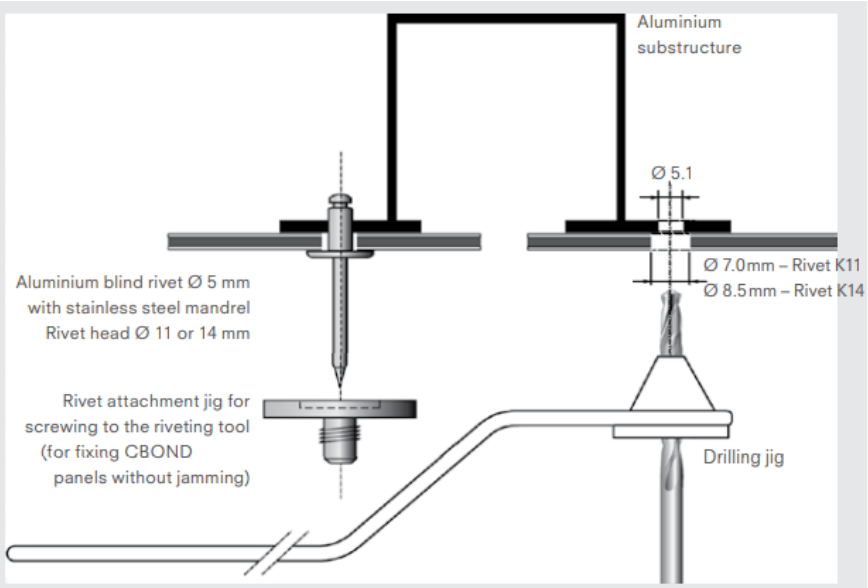
Calculation
2.4 mm x 3 (m) x 0.5 (Δt = 50 °C) = 3.6 mm panel expansion, i.e. half of the panel expansion must be expected on the opposite panel edges.

Riveting

Fastening & Joining Alubond Panels

- Use standard rivets for aluminum constructions.
- For outdoor or high-humidity use: choose aluminum blind rivets with stainless steel mandrels to prevent corrosion.
- If using aluminum blind rivets with steel mandrels, ensure they are detachable so the mandrel drops out after riveting.

Countersunk rivets are suitable for indoor use only



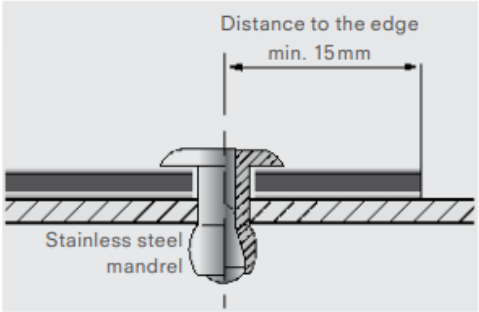
Guidelines for Outdoor Use

- Use construction-approved aluminium blind rivets with a 5 mm shaft diameter and a rivet head diameter of 11 mm or 14 mm.
- Account for thermal expansion of the panel (2.4 mm/m per 100°C). To prevent jamming, drill holes large enough to allow for this movement.
- Ensure the rivet shaft fits closely in the hole while the rivet head overlaps at least 1 mm around the hole.
- Use drilling jigs for precise, centered holes in both the panel and substructure.

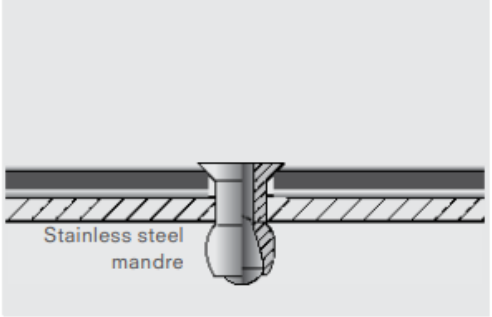
- Use rivet attachment jigs to set blind rivets without jamming (tolerance: 0.3 mm). Rivets and jigs should be from the same manufacturer, as rivet head heights (DIN 7337) may vary.
- Determine clamping thickness by adding 2 mm to the combined thickness of the riveted materials. Based on this, select the appropriate shaft length from rivet manufacturer tables (minimum length: 14 mm).



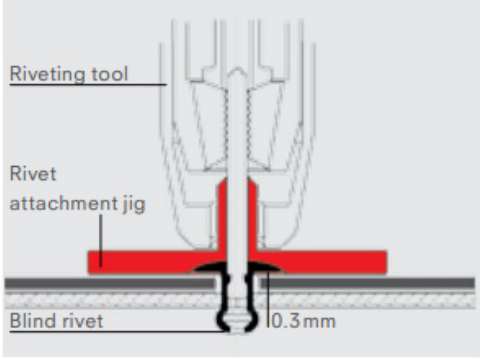
Top: Conical drilling jig, centre: drilling jig for hole = Ø 8.5 mm, bottom: rivet attachment jigs for rivet head dia. 11 and 14 mm mountable on riveting tool AccuBird (MBE)



Blind rivet with standard head.



Countersunk rivet
(for indoor use only)



Important Notice

During riveting, several factors (such as rivet head tolerance) may affect the exact 0.3 mm tolerance of rivets. We strongly recommend conducting a test on a façade panel before installation. Always remove the protective film from the riveting area prior to riveting.

Cleaning Guidelines

Regular cleaning of Alubond panels is essential to maintain performance and appearance.

Key benefits include:

- Aesthetic Maintenance: Preserves the visual appeal of architectural cladding by removing dust, dirt, and pollutants.
- Prevention of Staining/Discoloration: Protects against damage from pollutants, bird droppings, and environmental contaminants.
- Enhanced Durability: Extends panel lifespan by preventing deterioration caused by surface contaminants.
- Weather Protection: Reduces the impact of exposure to rain, wind, and sunlight, keeping surfaces in optimal condition.
- Fire Safety: Ensures fire-resistant properties remain effective by preventing buildup of dirt or debris.

Regular cleaning of Alubond Panels goes beyond maintaining appearance — it is a proactive step to safeguard their structural integrity, visual appeal, and functional performance. Consistent care ensures long-term durability and reliable performance in all environmental conditions

Cleaning

Cleaning Frequency. The required frequency of cleaning depends on location, environmental conditions, product type, and local pollution levels:

- High-risk areas (heavy dirt, dust, or pollution): Clean once per month.
- Low-risk areas (cleaner environments): Clean at least four times per year.
- If unsure, consult your local supplier for guidance.

Stubborn Stains

- Alkali cleaners such as Sharpshooter (pH ~12) or Windex (pH ~11) have proven effective for removing tough stains.
- Always rinse thoroughly with clean water after use, as residual chemicals can damage the panel surface.
- When handling these products, use gloves and protective eyewear, and follow the manufacturer's safety instructions.
- Caution: Non–pH-neutral products may permanently damage the protective coating and lead to panel failure.

Avoid Harsh Chemicals

- Do not use abrasive cleaners, strong solvents, or paint thinners, as they can scratch or degrade the surface finish.

New Cleaning Agents

- Always test any new cleaning solution on a small, inconspicuous area first to confirm compatibility.

Important Note

- Failure to clean panels periodically, especially in warm and highly polluted environments, can lead to dirt migration into the coating and permanent colour fading. Strict adherence to the cleaning guidelines is essential to maintain both aesthetics and performance.

Additional Notes

- Panels with a brushed surface require more frequent cleaning compared to smooth-surface panels. High-gloss panels (gloss level >70%) generally require less frequent cleaning, as their finish helps repel dust and particulates. Regardless of surface type, regular cleaning is necessary to maintain both the aesthetic appearance and the warranty coverage.

- Double Folding of Alubond Sheets:
  When fabricating cladding or tray panels, double-folding is mandatory. This reduces exposure of the polyethylene core and aluminium edges to environmental elements, significantly enhancing the durability, structural integrity, and appearance of the installation.

- Sealing of Exposed Edges:
  All exposed polyethylene or aluminium edges must be sealed to prevent corrosion and deterioration. We recommend using an approved edging sealant for maximum protection.

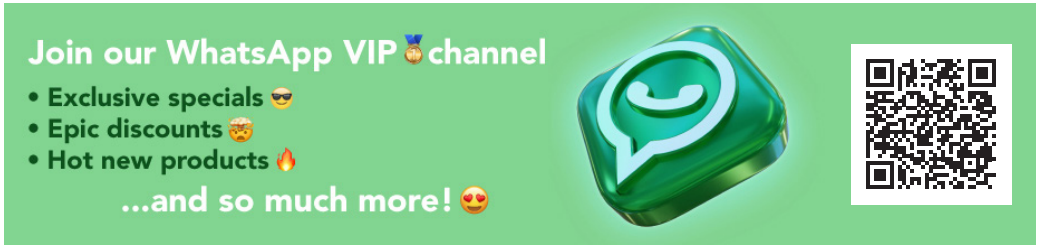
- Avoid Contact with Dissimilar Metals:
  Direct contact between the aluminium panel and other metals must be avoided. Such contact can trigger galvanic corrosion, compromising both the appearance and the longevity of the panel.

Warranty Notice

Please note that the validity of the product warranty is strictly dependent on following the recommended methods of cleaning, handling, and installation as outlined in this guide.

Any deviation from these guidelines, including but not limited to the use of unsuitable cleaning agents, improper installation techniques, or failure to adequately maintain the panels, may compromise the product's integrity and performance. In such cases, the warranty will be considered void, and any resulting damages or defects will not be covered. To ensure the longevity, durability, and continued warranty protection of the panels, it is essential that all instructions are adhered to without exception.

LOOKING FOR PRODUCT SPECS? NEED MORE INFO? OR JUST WANNA BROWSE MORE GUIDES? SCAN HERE TO CHECK OUT OUR DATA SHEETS!



Call us on 087 056 3231 or email: info@sytech.co.za