



Inspect aluminum composite panel joints, reveals & sealant

Inspect aluminum composite panel joints, reveals, and sealant lines via an interactive checklist, commentable and exportable as PDF/Excel. Ensure precise gaps.

Project:

Date:

Filled by:

Preparation and Access Control

1	Confirm safe access (scaffolds or MEWP) is positioned, inspected, and tagged; anchor points verified. Record permit-to-work and daily inspection tag ID; capture access photos before starting measurements.
2	Review approved shop drawings for joint and reveal dimensions, bead width/depth, and sequences per approved project specifications and authority requirements; note drawing numbers and revisions in the checklist.
3	Measure ambient and surface conditions with a thermohygrometer and IR thermometer: 5–40 °C, ≤85% RH, and ≥3 °C above dew point; log readings with time and location.
4	Clean panel edges and adjacent substrates using manufacturer-approved cleaner and lint-free cloth; no residue, dust, or oil. Record cleaner type and batch; attach before/after photos.

Joint Layout and Alignment

5	Confirm panel grid alignment with a laser line and 2 m straightedge; deviation ≤2 mm over 2 m. Photograph laser alignment and note locations checked.
6	Verify joint centrelines coincide at intersections; offset ≤2 mm. Use chalkline reference and capture close-up photos of T- and cross-joints.
7	Check panel plane across adjacent units with a straightedge and feeler gauges; step or pillowing ≤2 mm. Record readings and corrective actions if exceeded.
8	Assess reveal continuity and parallelism against datum using a laser and tape; variance ≤2 mm over 2 m run. Document with oblique and close-up photos.
9	Inspect for fastener telegraphing or distorted edges near joints; no visible deformation affecting gap uniformity. Photograph any anomalies and reference panel IDs.

Joint Width and Condition

10	Measure joint width every 1 m and at corners using a digital caliper; tolerance ±1 mm from design (e.g., 10 ±1 mm). Log each reading by gridline and elevation.
11	Check panel edges for burrs or nicks; defects >0.5 mm require dressing with a deburring tool to prevent sealant voids. Attach before/after photos.
12	Ensure joint cavities are dry and free of dust, tape remnants, and packing; use a soft brush and compressed air. Wipe test shows no residue; capture cleanup evidence.
13	Remove temporary shims/packers bridging joints unless specified spacers are required; confirm no rigid bridging that restricts movement. Bag and photograph removed materials.

Backer and Primer Setup	
14	Select closed-cell backer rod diameter 25–33% larger than joint width to prevent three-sided adhesion; record supplier, lot, and size range.
15	Install backer rod with a roller tool to uniform depth; depth tolerance ± 1 mm from design. No twisting, tearing, or gaps; photograph representative sections.
16	Apply manufacturer-required primer to both joint flanks with a clean brush; continuous film without puddles. Record primer type, batch, and start/finish times; attach wet-edge photos.
17	Verify primer flash-off/cure time per datasheet before sealing; perform fingertip tack check with a clean glove. Log elapsed minutes and acceptance.

Sealant Application and Finish	
18	Extrude sealant with a pneumatic gun at steady speed, ensuring a continuous bead; bead dimensions per design (e.g., 10 mm width $\times$ 5 mm depth). Record sealant type, batch, and expiry.
19	Tool the bead to a smooth, concave profile using an approved spatula; wetting both flanks, no pinholes or entrapped air. Photograph finish at 1 m intervals.
20	Verify bead width with a scale every 1 m (variance $\leq \pm 1$ mm) and depth with a probe gauge at representative points; record measurements and locations.
21	Remove masking tape within the manufacturer's window to avoid edge lift; dispose responsibly. Capture edge detail photos immediately after removal.
22	Confirm cure milestones: surface tack-free within specified time; after 7 days, Shore A hardness within datasheet range using a durometer. Log readings and date stamps.

Reveals, Trims, and Terminations	
23	Inspect reveal and trim pieces for tight, even fit; visible gaps ≤ 1 mm and finish consistent. Photograph corners, stops, and splices.
24	At corners and end terminations, confirm sealant continuity and maintained weep/drain paths; perform light water spray (5 min) with no leaks observed. Attach photos/video and notes.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Inspect aluminum composite panel joints, reveals, and sealant lines with a structured, field-ready process that focuses on alignment, uniform gaps, and durable sealing. This checklist targets ACP panel joints, reveal trims, and sealant beads at cladding interfaces, guiding inspectors and installers through practical steps to prevent water ingress, rattling panels, staining, and premature sealant failure. You will validate layout against shop drawings, measure gap widths and straightness, verify backer rod and primer setup, and confirm a smooth, adherent, and properly cured bead. Acceptance cues are built in, including mm-level tolerances, dew point margins, and manufacturer-referenced practices per approved project specifications and authority requirements. The outcome is consistent reveals, reliable movement accommodation, and a weather-tight facade backed by photo evidence, batch records, and signatures. Use this on mockups, production areas, and punch-list closeouts. Start interactive mode to tick items, add comments, and export PDF/Excel using the embedded QR for traceable sign-off.	1. Preparation: Gather laser, 2 m straightedge, calipers/feeler gauges, thermohygrometer, IR thermometer, durometer, approved cleaners, backer rods, primers, sealants, PPE, and current shop drawings. Verify safe access and permits. 2. Start interactive mode: Open the checklist on your device, scan the area QR, and enable geotagging and timestamps. Create sections by elevation/gridline for organized evidence capture. 3. Conduct inspection: Work top-to-bottom, ticking items as completed. Add comments with measurements, photos, and batch numbers. Flag nonconformances with corrective actions and assign owners and due dates. 4. Export and share: Generate a structured PDF/Excel with embedded photos, comments, and readings. Include QR authentication and distribute to the site team and stakeholders. 5. Sign-off: Obtain digital signatures from inspector, installer, and supervisor. Archive the report to the project folder with revision control and retain material certificates and tool calibration records.

