



Inspect Curtain Wall Splice Joints and Movement Allowances

Inspect curtain wall splice joints and movement allowances with an interactive checklist that is commentable and can export as PDF/Excel, capturing evidence, verifying movement, and streamlining sign-off.

Project:

Date:

Filled by:

Documentation and Access Preparation

1	Confirm approved shop drawings and splice details; record required movement values (thermal ΔT , design drift). Acceptance: latest revision used; movement values identified. Evidence: annotated drawing snapshot with date/rev.
2	Verify calibrated tools available: laser level, digital caliper (± 0.01 mm), feeler gauges (0.2–2.0 mm), torque wrench, hygrometer/thermometer. Acceptance: calibration in date (≤ 6 months). Evidence: photos of calibration labels.
3	Check weather for sealant tasks: substrate dry; ambient 5–40 °C; surface ≥ 3 °C above dew point. Acceptance: meets manufacturer limits. Evidence: hygrometer screenshot with time/location.

Splice Joint Alignment and Fit-Up

4	Measure mullion face offset at splice using straightedge and feeler gauges. Acceptance: ≤ 1.0 mm offset. Evidence: close-up photo showing gauge and scale.
5	Check plumb/level across the splice with laser over 3.0 m reference. Acceptance: deviation ≤ 2 mm. Evidence: laser reading photo with reference marks.
6	Verify designed splice gap using caliper per detail (e.g., 8 ± 1 mm). Acceptance: within specified tolerance. Evidence: caliper measurement photo.
7	Confirm sleeve/connector insertion length each side (e.g., ≥ 75 mm or per submittal) with scribe marks. Acceptance: meets or exceeds detail. Evidence: photo with ruler and marks.
8	Deburr and clean mating surfaces; remove swarf, oils, and old sealant. Acceptance: bright, clean contact surfaces. Evidence: before/after photos and disposal note.

Fasteners and Connectors

9	Verify fastener type/grade/coating matches submittal; confirm compatible with aluminum. Acceptance: correct markings and finish. Evidence: packaging labels and batch/lot numbers recorded.
10	Check slotted hole orientation aligned with movement direction; clearance around shank ≥ 2 mm; use oversize washers. Acceptance: slot free of burrs; no ovalized bolts. Evidence: macro photo with feeler gauge.
11	Tighten connectors: snug-tight then final torque per submittal. Acceptance: recorded torque within $\pm 10\%$ of specified. Evidence: torque log with bolt IDs and readings.
12	Confirm no metal-to-metal binding at slip interfaces; install PTFE/bond-breaker tape where detailed. Acceptance: sliding surfaces isolated. Evidence: close-up photos of isolation material placement.

Sealing and Moisture Management	
13	Verify thermal break continuity through splice; no exposed conductive bridges. Acceptance: uninterrupted barrier; IR spot check ΔT across break ≤ 2 °C. Evidence: annotated IR or temperature images.
14	Ensure drainage/pressure-equalization paths open; weep slots ≥ 6 mm clear. Perform 0.5 L pour test; drainage within 60 s. Acceptance: no back-up or leakage at interiors. Evidence: test video/photos.
15	Install backer rod at 25–50% compression; diameter $1.25\text{--}1.5\times$ joint width; closed-cell unless specified otherwise. Acceptance: uniform depth. Evidence: caliper photo and segment length noted.
16	Apply primer (if required) and sealant; tool to 6–10 mm concave bead; no voids or pinholes. Acceptance: adhesion per manufacturer field test. Evidence: peel test result and bead photos.
17	Check weather gaskets continuous with correct join method; splice keys installed; stretch $\leq 3\%$. Acceptance: uniform compression, no twists. Evidence: close-ups along full length.

Movement Allowances and Verification	
18	Validate thermal movement capacity: calculate $\Delta L = \alpha \times L \times \Delta T$ from submittal values; confirm available slip length $\geq$ required $\times 1.5$ safety factor. Acceptance: documented compliance. Evidence: attached calculation sheet.
19	Simulate movement: loosen to slip condition per method, insert shims/feeler to displace 5–10 mm, confirm free sliding, then re-torque. Acceptance: no binding or damage. Evidence: displacement photos and torque recheck.
20	Verify interstory drift allowance at splice: shear slot/clearance $\geq$ design drift (e.g., 15 mm) with ≥ 3 mm reserve. Acceptance: measured slot length and free path. Evidence: photo with scale.
21	Ensure sealant and gaskets do not bond to sliding surfaces; install bond-breaker/release tape where detailed. Acceptance: sliding interfaces unrestrained. Evidence: close-up showing tape continuity.
22	Final verification: label inspected splice with gridline/elevation; capture overall photos; obtain inspector's digital signature. Acceptance: all items complete with no open NCRs. Evidence: signed digital checklist.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Inspect curtain wall splice joints and movement allowances to ensure the façade can accommodate thermal expansion, interstory drift, and construction tolerances without leakage or binding. This curtain wall joint inspection focuses specifically on mullion and transom splice interfaces, movement joints, and their associated fasteners, gaskets, and sealants. By concentrating on splice alignment, connector engagement, slotted-hole orientation, and moisture management details, you prevent cracking sealant, stressed glazing, and fastener fatigue. Verifying movement capacity at the splice—rather than at anchors or perimeter seals—keeps scope tight and decisions clear. The outcome is a resilient, pressure-equalized envelope with continuous thermal breaks and documented evidence: torque logs, calibrated measurements, and photo records. Use this field-ready, interactive checklist to capture measurements, attach photos with scales, and reference approved submittals. Tick items as you go, add location-tagged comments for any nonconformities, and export your results as PDF/Excel with a QR-secured link for sign-off and future traceability.	1. Preparation: review approved drawings and submittals for splice details, movement values, and sealant requirements. Gather calibrated tools (laser, calipers, feeler gauges, torque wrench, hygrometer), PPE, access equipment, and cleaning materials suitable for aluminum. 2. Open the checklist in interactive mode. Set project, gridlines, elevations, and inspector details. Enable geolocation and time stamps so photos and readings are auto-tagged for traceability. 3. During inspection, tick each item, input measurements with units, and attach close-up photos or short videos. Use comments to note observations, reference drawing details, and link to material batch labels. 4. Manage nonconformities by flagging items, assigning actions, and setting due dates. Add responses and follow-up photos in comment threads to maintain a clear corrective record. 5. Export results as PDF/Excel with embedded photos, torque logs, and drawings. Include a QR code for secure verification and quick retrieval during audits and walkthroughs. 6. Sign-Off: obtain digital signatures from the inspector and reviewer, distribute the report to stakeholders, and archive the record per approved project specifications and authority requirements.