



# Test façade mock-up: water penetration under static pressure

Test façade mock-up for water penetration under static pressure with an interactive checklist that is commentable and can export as PDF/Excel, delivering traceable, calibrated evidence.

Project:
Date:
Filled by:

## Pre-Test Documentation

1	Verify latest drawings, material data sheets, and test protocol match approvals; upload signed protocol and submittal register as evidence.
2	Confirm mock-up dimensions, joints, and interfaces match submittals within $\pm 3$ mm; record measurements and attach annotated photos.
3	Record ambient air temperature ( $^{\circ}\text{C}$ ), relative humidity (%), and wind speed ( $< 3$ m/s preferred) with calibrated instruments; photograph instrument displays.
4	Conduct a safety briefing covering water management, slip hazards, and edges; collect attendance signatures and upload the toolbox talk record.

## Mock-Up Preparation

5	Inspect frames, glazing, sealants, and interfaces for defects; repair per manufacturer guidance; capture before/after photos and lot numbers used.
6	Install watertight test chamber or containment panel against exterior face; verify continuous seals; photograph gaskets and fasteners.
7	Mask non-tested joints and penetrations per protocol; upload masking layout sketch and labeled photos.
8	Place interior blotter paper, absorbent pads, and drip trays beneath critical joints; photograph baseline dry condition with timestamp.
9	Protect electrical equipment; isolate and lock out circuits in the test area; attach LOTO record and supervisor sign-off.
10	Verify drainage/weep paths by pouring 2 L of water; confirm discharge within 60 s; video and note flow paths.

## Instrumentation and Calibration

11	Calibrate manometer or pressure gauge to $\pm 1\%$ full-scale; upload current calibration certificate and photo of zero check.
12	Calculate target static head using $\rho gh$ ; record setpoint in Pa and equivalent mm water; attach calculation sheet.
13	Verify flow meter accuracy to $\pm 2\%$ ; zero totalizer; capture reading before fill and after test with photos.
14	Place interior moisture sensors/data loggers; set 1 min logging interval; synchronize clock to phone time; screenshot configuration.

Test Execution	
15	Fill chamber gradually to target head over 3–5 min to avoid shock; video the manometer rise and record timestamps.
16	Maintain constant static head within $\pm 5$ mm for specified duration; log readings every 5 min; photograph gauge at each interval.
17	Continuously observe interior surfaces with flashlight/mirror; record first wetting time and location; take macro photos of droplets.
18	Apply non-staining tracer dye at suspected exterior joints after 30 min if needed; document dye paths with photos and notes.
19	Measure joint movement with feeler gauges where applicable; note gap change to $\pm 0.5$ mm; capture close-up photos.
20	Measure framing deflection using a ruler or laser; record maximum deflection and location; compare against project criteria.

Observations and Recording	
21	Measure collected leakage volume with a graduated cylinder ( $\pm 5$ mL); log per location and time; photograph measuring meniscus.
22	Mark leak locations on a grid elevation; tag coordinates; upload annotated sketch linked to photos.
23	Capture team comments and hypotheses as time-stamped audio or text; link to specific observations for traceability.
24	Log anomalies such as foam, temperature shifts, or head fluctuations $> \pm 10$ mm; note probable causes and immediate actions.

Post-Test Actions	
25	Drain chamber slowly to avoid backflow; measure and log total discharge volume; document disposal per environmental plan.
26	Remove masking; scan for hidden moisture with IR camera and pin meter; record %MC and capture thermal images.
27	Clean and dry all surfaces; restore protections; photograph final condition and any temporary repairs.
28	Assess results against acceptance criteria (e.g., no interior wetting) per approved project specifications and authority requirements; obtain signatures.
29	Create punch list of leaks with responsibility, repair method, and retest date; issue to stakeholders with sign-off.
30	Archive photos, videos, logs, and calibration certificates; export PDF/Excel; store QR-authenticated link for audit.

**Comments:**

Filled by:

Signature:

Introduction	How to use this checklist
<p>Test façade mock-up for water penetration under static pressure is a preconstruction and project-specific verification method to assess watertightness before full-scale installation. This checklist supports façade water tightness testing using a static water column or chamber, sometimes called a static head water penetration test or mock-up chamber testing. The scope covers exterior wall assemblies, interfaces, and joints configured in a controlled mock-up that matches approved submittals. You will prepare the assembly, calibrate instruments, apply and hold a specified static head, then observe, measure, and document any interior wetting. By focusing on static pressure only, this guide avoids spray-cyclic or dynamic wind-driven methods. Following it reduces costly rework, prevents concealed moisture, protects finishes and equipment, and produces traceable evidence for stakeholders per approved project specifications and authority requirements. Start in interactive mode to tick items, add comments, and export your results to PDF/Excel with a secure QR for authentication.</p>	<p>1. Preparation: Confirm approved drawings and acceptance criteria; assemble test chamber, manometer, flow meter, moisture sensors, lighting, dye, absorbents, and PPE (gloves, boots, eye protection). Ensure site access, power isolation if needed, and safe water disposal arrangements. 2. Using the Interactive Checklist: Start interactive mode, tick each item as completed, attach photos and readings, and add time-stamped comments for anomalies. When finished, export the record as PDF/Excel and share the QR-authenticated link. 3. Sign-Off: Capture digital signatures from contractor, consultant, and manufacturer representatives. Distribute the report to stakeholders, archive in the project CDE, and verify the QR link resolves to the immutable dataset.</p>