



Prepare construction joints (interface): Horizontal checklist

Prepare construction joints (interface) with an interactive checklist for horizontal concrete; commentable and export as PDF/Excel for sign-off before placement.

Project:

Date:

Filled by:

Pre-Work Verification

1	Confirm latest approved drawings/specifications identify joint location, finish profile, bonding system, and waterstop details; photograph revision stamp and record document numbers.
2	Verify substrate maturity permits mechanical roughening; record compressive strength via cylinders/maturity or age log; accept \geq specified threshold per project requirements.
3	Record ambient and substrate temperature and RH; accept 5–35 °C substrate and within bonding agent limits; attach calibrated thermometer/hygrometer readings.
4	Set access/edge protection and PPE; complete task briefing; upload signed toolbox talk and photos of barriers, covers, and exclusion zones.

Surface Roughening

5	Mark joint limits and any no-damage zones around embedded items; photograph chalk lines and tags for traceability.
6	Mechanically roughen with bush hammer/scabbler/needle scaler to CSP 5–7 or 3–6 mm amplitude; evidence with profile comparator photo and depth gauge spot checks.
7	Remove all laitance and weak mortar until sound coarse aggregate is exposed 30–50%; verify by ring test and macro photo documentation.
8	Protect arrises and reinforcement; no bar damage or loss of cover; record visual check and note any repaired spalls with photos.
9	Form or confirm specified shear keys/rebates where required; measure dimensions with steel rule; photograph and log measured values per drawings.

Cleaning and Dryness

10	Vacuum thoroughly with HEPA unit; blow-down using dry, oil-free compressed air (0.6–0.8 MPa); accept no visible dust on wipe test; upload photos.
11	Wet or pressure-wash (10–20 MPa) if permitted; remove standing water; accept SSD for cementitious bonding or dry per epoxy requirements; record moisture meter reading.
12	Degrease localized contaminants with approved detergent/solvent; rinse per TDS; accept uniform wetting in water-drop test; attach product SDS and lot photo.
13	Final cleanliness/roughness inspection by supervisor/QC; document with close-ups at three random locations and a wide-angle overview.

Bonding Interface	
14	Confirm bonding system (cement slurry, polymer-modified, or epoxy) per approved project specifications and authority requirements; capture product name, lot, and expiry label.
15	Mix bonding agent per manufacturer instructions; record batch time, ambient/substrate temperatures, and pot life; upload mix log and calibrated scale reading.
16	Apply bonding layer uniformly by stiff brush/roller to cover all high points; accept continuous film with no pinholes; photo with wet-film gauge where applicable.
17	For cementitious slurry, keep surface SSD (no free water); for epoxy, accept dry substrate; record moisture value and SSD confirmation photo.
18	Record open time window and tack condition immediately before readiness check; accept within manufacturer-specified limits; timestamp photos of surface state.

Waterstop Placement	
19	Verify waterstop type/size (hydrophilic strip or PVC) matches drawings; record storage conditions, lot numbers, and expiry; photograph packaging.
20	Align waterstop along joint; maintain continuous runs; for PVC, heat-weld laps per TDS; accept straight, untwisted line; photo each lap and weld bead.
21	Fix hydrophilic strip with compatible adhesive/nails for full contact; accept no gaps >3 mm; record adhesive batch and cure time with photos.
22	Secure PVC waterstop to reinforcement to maintain position; accept centralization within ± 5 mm; photo gauge checks at three locations.
23	Protect installed waterstop from traffic/debris using covers; accept no cuts, kinks, or punctures; upload close-up condition photos.

Joint Readiness and Documentation	
24	Install temporary edge dams or covers to prevent debris recontamination; photo overall protected joint ready for next activity.
25	Capture geo-tagged photos of roughness gauge, bond coat, and waterstop alignment; attach to corresponding steps in the checklist.
26	Complete QC review with supervisor/inspector; confirm all acceptance criteria met; record names, timestamps, and digital signatures.
27	Export the signed checklist with readings, photos, and batch data to PDF/Excel; archive the QR-authenticated record for traceability.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Prepare construction joints (interface) for horizontal concrete is critical to long-term durability and watertightness. This checklist focuses on construction joint preparation, including mechanical roughening, meticulous cleaning, correct bonding agent application, and precise waterstop installation. It excludes any guidance on concrete placements or pours. By controlling surface profile, laitance removal, substrate moisture, and bonding open time, you reduce delamination risk and improve shear transfer at the interface. Waterstop placement—whether hydrophilic strip or PVC—must be aligned, continuous, and protected to prevent leaks. The scope applies to horizontal joints in slabs, beams, and similar cast-in-place elements, per approved project specifications and authority requirements. Use it to standardize field tasks, avoid rework, and capture auditable evidence such as readings, photos, batch data, and sign-offs. Start in interactive mode to tick steps, add comments for nonconformances, and export as PDF/Excel with a QR-linked record for traceable handover.</p>	<p>1. Preparation: Gather roughening tools (bush hammer/scabbler), HEPA vacuum, oil-free compressor, moisture meter, bonding agent and TDS, waterstop materials, PPE, edge protection, and calibrated thermohygrometer. 2. Open the checklist in interactive mode on your device; review scope, drawings, and acceptance criteria before mobilizing to the joint. 3. Execute tasks in sequence; tick each step, attach photos (close-ups and overviews), and record measurements, batch data, and timestamps. 4. Use comments to flag nonconformances, assign actions, and note approvals per approved project specifications and authority requirements. 5. Perform a joint readiness review with supervisor/QC; add digital signatures to the final section when all criteria are met. 6. Export the completed, commentable record as PDF/Excel and archive it with a QR code link for traceable closeout.</p>