

Concrete Finishing JHA

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Learning and planning resource. Adapt with the people doing the work, verify actual controls and follow required authorization. This document supplies no completed field inspections, signatures or work approval.

Work and worksite

This fictional example covers cosmetic sack-and-patch finishing of a cured concrete wall at ground level in an unfinished building. The crew inspects the surface, removes small approved projections, mixes the specified cementitious patch material, fills defects, and cleans the area. Work remains reachable from the floor; elevated platforms, swing stages, and structural repairs are excluded. Sack-and-patch is the defined finishing activity here. Fresh-slab screeding and power-trowel finishing involve different equipment and are not silently included under the same title.

- Confirm the repair specification and whether the observed defects are cosmetic. Cracking, exposed reinforcement, extensive voids, or signs of structural distress require responsible technical review.
- Identify the existing substrate and any coating, release agent, or contamination. Review the actual patch product's SDS and instructions, including additives and cleaning products.
- Select the surface-preparation method and dust-control route before starting. Mixing, grinding, and chipping are different tasks and may need different exposure controls.
- Provide suitable handwashing, splash response, ventilation, waste collection, and a work boundary that protects adjacent trades. Choose application tools that limit direct skin contact and awkward reach.

Actual project records needed: Location, crew and responsible people; equipment models and instructions; permits/releases; emergency arrangements; actual checks and approvals.

Task | Hazard | Control | Verification

Inspect and mark the repair scope

Hazard: Treating a structural defect as a cosmetic blemish can conceal damage; unknown surface contamination can expose workers during preparation.

Control: The supervisor compares the defects with the repair specification and marks the permitted work area. Refer cracks, exposed reinforcement, unexpected voids, and uncertain coatings to the responsible personnel before disturbance. Confirm the substrate and product compatibility; this task analysis does not approve a structural repair.

Verification: Record the defined repair boundary and any defects excluded pending technical review.

Reasoning: The first safety decision is whether the proposed work matches the actual condition.

Prepare tools, material handling, and the work station

Hazard: Poor staging creates repeated lifting and awkward reach; damaged mixers, cords, or containers can cause injury or spills.

Control: Stage manageable quantities close to the repair area on stable supports. Inspect the selected mixer and hand tools, arrange power safely, and control access around the mixing station. Use smaller manageable transfers or suitable handling aids instead of repeatedly carrying full containers from a distant stockpile.

Verification: Try the route and working height before filling containers; confirm tools and leads are serviceable.

Reasoning: A sensible layout reduces the physical demand of every subsequent batch.

Remove approved surface projections and residue

Hazard: Grinding or chipping can release silica and flying fragments; a wheel or bit can contact workers or remove unintended concrete.

Control: Choose the least aggressive suitable method within the repair specification. For powered preparation, fully implement the applicable silica Table 1 method or exposure-assessment route and use compatible guards and dust controls. Distinguish indoor grinding from chipping when determining respiratory protection. Keep bystanders clear and stop for unexpected reinforcement, services, or damage.

Verification: Confirm the exact tool, task, dust system, guarded setup, and authorized removal limit.

Reasoning: Calling the work 'finishing' does not reduce the exposure created by a concrete grinder or chipping tool.

Measure and mix the specified patch material

Hazard: Powder creates inhalation exposure; wet cementitious material can injure eyes and skin, and a rotating paddle can entangle clothing or hands.

Control: Follow the actual product instructions and SDS. Control powder release at the mixing point, assess exposure, and use the employer's selected ventilation or other controls. Keep hands and loose clothing clear of the moving paddle and isolate the mixer before adjustment or cleaning. Use compatible eye protection and cement-resistant gloves and clothing.

Verification: Confirm the batch method, required exposure controls, reachable washing supplies, and guarded or otherwise properly controlled mixing setup.

Reasoning: A grinding control does not automatically address exposure from opening and mixing bags.

Apply and work the patch into the surface

Hazard: Repeated direct contact with wet material can cause cement burns or dermatitis; overhead reach and forceful spreading can strain shoulders.

Control: Use suitable application tools and arrange work within a comfortable reach, maintaining clean interiors of gloves and other protection. Avoid bare-hand smoothing. Stop to remove contaminated clothing and wash exposed skin promptly. Do not rely on barrier cream as a substitute for avoiding contact. Review a separate access method if the work extends beyond floor-level reach.

Verification: Confirm workers can reach the repair without overextension and know where to wash and replace contaminated gloves.

Reasoning: Wet cement may damage skin before pain develops; protecting only against visible splashes misses sustained contact.

Finish the surface and protect the repair

Hazard: Unplanned sanding or chemical substitution can introduce a new dust or vapor exposure; wet floors can cause slips.

Control: Follow the specified finishing and curing method. Keep the work boundary and floor conditions controlled. Do not add dry sanding, grinding, solvents, or a different repair compound without reviewing its controls. Label or otherwise identify restricted repair areas and coordinate access with adjacent trades while material cures.

Verification: Verify the actual finish method matches the assessed task and that the access route remains dry and clear.

Reasoning: A small change intended to improve appearance can change the exposure more than the original application did.

Clean equipment and release the work area

Hazard: Mixer movement, cement-contaminated wash water, and dried residue can expose workers during cleanup.

Control: Isolate equipment before cleaning where unexpected operation could injure someone. Collect residue and wash water in designated containers; use HEPA vacuuming or suitable wet cleanup for silica-containing dust rather than dispersing it. Remove waste, clean reusable protection, and communicate curing restrictions and unresolved defects to the receiving supervisor.

Verification: Confirm equipment is safely isolated, waste is controlled, and the repaired area is handed over with its limitations.

Reasoning: Cleanup is part of the exposure assessment, not a reason to remove controls early.

Pause and reassess

- Pause for cracks, exposed reinforcement, unknown coatings, or defects beyond the cosmetic repair specification.
- Reassess changes to patch product, additives, solvent use, indoor ventilation, tool type, or preparation duration.
- Develop a separate analysis if work requires elevated access, structural repairs, fresh-slab finishing, or powered trowels.

Correct the condition, revise the analysis, communicate the change and obtain required authorization before restarting.

Improve the control

Needs improvement: Concrete finishing: wear PPE.

More useful: Separate preparation, mixing, and application; choose dust controls for the actual tool and prevent wet material remaining against skin.

Needs improvement: Patch all defects shown by the foreman.

More useful: Define the cosmetic repair boundary and refer cracking, exposed reinforcement, and unexpected voids for technical review before covering them.

Decisions that change the analysis

The specified patch does not fill a deep void. Should the crew use more material?

Stop and have the defect and repair method reviewed. A larger defect may fall outside the cosmetic scope and product limits.

Can the crew sand the dry repair because the finish looks uneven?

First assess the added dust-producing method, product composition, tool controls, and respiratory requirements. Do not treat dry sanding as automatically covered by wet application controls.

References and adaptation

OSHA — Preventing Skin Problems from Working with Portland Cement

<https://www.osha.gov/sites/default/files/publications/OSHA-3351-portland-cement.pdf>

OSHA 1926.1153 — Silica controls for preparation and cleanup

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1153>

OSHA 1926.302 — Power-operated hand tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.302>

NIOSH — Simple Solutions: Ergonomics for Construction Workers

<https://www.cdc.gov/niosh/publications/numbered/2007-122.html>

This original walkthrough was informed by review of uploaded examples, then rewritten for the stated fictional scenario using current primary references. It does not reproduce a source document or its approval record.

Walkthrough and draft builder: <https://www.toddjeromejenkins.com/jha-jsa-examples/concrete-finishing-jha>