

Cementitious Masonry Foundation Waterproofing JHA

Worked instructional example

Work and worksite

A waterproofing crew will brush the selected Sika Thoroseal-581 and Acryl 60 system onto one released interior CMU foundation-wall area in an unoccupied building. The accepted floor and protected platform provide access without excavation entry. Required repairs, pressure-relief provisions and wall/floor interface preparation are independently complete. The operation controls substrate conditioning, material mixing, coat inspection and protected curing before the specified waterproofing handover. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The current US waterproofing detail accepts the selected system, actual masonry and moisture/pressure condition. Wall soundness, active leakage, moving cracks, required relief and prepared transitions are technically resolved before coating.
- Current powder, modifier and mixing-tool instructions and SDS are available. Ventilation, dry-material exposure controls, washing, spill/washwater containment and accessible work positions are established.
- Foundation-construction coverage is partial: accepted masonry interior waterproof coating only. Wall laying, excavation, new weep drilling, active-leak plugging, structural repair, stucco, exterior backfilling and drainage redesign are excluded.

Questions before work

- What evidence accepts this coating for the actual wall and moisture/pressure condition?
- How will the selected modifier blend, prepared substrate and coat completeness be verified?
- Who retains responsibility for cure protection and the separate foundation/drainage acceptance?

Task Hazard Control

1 Accept the foundation waterproofing interface

Hazard: Coating an unsound or actively leaking wall can conceal defects and fail without resolving the underlying water path.

Control: Waterproofing lead matches the masonry survey and current detail to the selected product's interior foundation application. Confirm accepted repairs, static/moving crack disposition, pressure-relief provisions and wall/floor transitions. Refer changed seepage or substrate conditions before work; a waterproof coating is not wall stabilization, drainage design or permission to drill relief holes.

Verification: Lead records the actual substrate/interface release and resolved moisture-condition acceptance.

Reasoning: Surface treatment must follow an accepted water-management and substrate basis.

2 Prepare protected access and exposure controls

Hazard: Restricted reach, bag dust, wet cement and splash can expose the crew or contaminate surrounding areas.

Control: Release floor/platform support and keep routes clear of stock and tools. Set a controlled mixing station with ventilation and assessed dry-material controls. Arrange product-specific hand, eye, clothing and respiratory measures where required, washing and spill response. Protect adjacent work and collect washwater; do not rely on an indoor wall's appearance to settle exposure or access needs.

Verification: Lead verifies stable access, mixing controls, washing and contained residue routes.

Reasoning: Readiness includes worker protection and waste handling.

3 Verify and condition the prepared substrate

Hazard: Residual contamination, dry suction or an unaccepted void can prevent adhesion or hide a discontinuity.

Control: Inspect the independently prepared wall against the actual system instructions. Hold contamination, loose material, active leakage or unresolved cracks for the responsible preparation/repair lead. Perform only the prescribed nonintrusive cleaning and water conditioning within this release, retaining controlled runoff. Verify the required surface state before coating; do not start powered preparation, cutting or additional patching under this example.

Verification: Installer records prepared-wall findings and the instructed conditioning state.

Reasoning: An apparently smooth surface does not demonstrate acceptable coating readiness.

Complete the work and hand over

4 Mix the identified compatible system

Hazard: Wrong liquid blend, dust release or contact with a rotating paddle can injure workers and compromise the coating.

Control: Identify Thoroseal-581, Acryl 60 and permitted water against instructions/SDS. Measure the actual instructed blend and batch quantity; use the accepted slow-speed mixing-tool method with stable container support and hands clear. Follow prescribed wet-out/rest and remix requirements, isolating the tool before intervention. Add no substitute polymer or unscheduled water to rescue an aging batch.

Verification: Operator records product identities, instructed batching and acceptable mixture condition.

Reasoning: The modifier and mixing process contribute to the selected system's properties.

5 Brush and inspect the prescribed coat sequence

Hazard: Pinholes, missed joints, poor timing or skin contact can leave an incomplete barrier and expose the applicator.

Control: Apply by the accepted brush method, working material into the specified masonry surface while maintaining safe reach and cement protection. Verify coverage and discontinuities at the actual hold points. Follow the project/product criteria for subsequent coats and orientation; resolve differing masonry timing instructions with the manufacturer before continuation. Hold active water, adhesion failure or surface change rather than hiding it with extra material.

Verification: Named checker records each coat's actual coverage, condition and next-coat release.

Reasoning: Uniform color does not demonstrate accepted waterproof continuity.

6 Maintain cure protection and transfer status

Hazard: Early water exposure, later drilling or uncontrolled washing can damage the layer and mislead following trades.

Control: Protect the completed coating through actual moisture, temperature and access requirements; assign continuing checks across shifts. Clean tools by the permitted wet method and contain cementitious washwater. Transfer coat records, cure observations and unresolved defects for designated acceptance. Preserve separately required relief/drainage measures; no generic curing period, dry-looking surface or product test rating establishes the foundation's final waterproofing acceptance.

Verification: Receiving lead verifies cure responsibility and remaining handover holds.

Reasoning: Coating completion is one controlled stage within the foundation water-management system.

Pause and reassess

- Current system/substrate acceptance, completed repairs, pressure disposition or interface readiness is missing.
- Dust/contact controls fail, active water appears, mixture identity changes or a coat has unacceptable adhesion or continuity.
- Cure protection cannot be maintained, next-coat criteria conflict or another trade proposes unaccepted drilling, covering or drainage changes.

Improve the controls

Needs improvement: Brush cement paint over the wet wall.

More useful: Resolve wall soundness, leakage, pressure and transitions, then apply the accepted complete waterproofing system.

Needs improvement: The surface looks dry; release the foundation.

More useful: Record coat and cure findings, retain protection and obtain the actual system acceptance with separate drainage responsibilities clear.

Decisions that change the analysis

Is this a location variant of CMU laying or stucco?

CMU laying assembles units, reinforcement and temporary stability. The stucco example applies a specified finish coat to released lath. This work accepts a foundation moisture/pressure interface and constructs a continuous waterproof layer on retained masonry using the selected modifier, coating sequence and cure criteria. It does not claim complete foundation construction.

What must the crew record for actual use?

Record the actual work boundary, governing documents, responsible people, acceptance criteria, control findings and unresolved actions. Communicate restrictions and obtain required project authorization; this fictional example records no completed inspection or installed-control acceptance.

Training needs

- Selected cementitious waterproofing-system instruction covering substrate readiness, compatible powder/modifier, controlled mixing, coat inspection and cure protection.
- Dry-bag and wet-cement exposure prevention, safe paddle use, ventilation, contained washing and restricted-area handover.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

Sika USA Thoroseal-581: masonry waterproofing instructions

<https://usa.sika.com/en/construction/repair-protection/mortars/Waterproofing-Mortars/sika-thoroseal-581.html>

Sika Thoroseal-581 PDS, September 2024, version 02.01

<https://usa.sika.com/content/dam/dms/us01/n/sika-thoroseal-581.pdf>

OSHA 1926.1153: construction silica exposure controls

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

References reviewed October 13, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.