

Reinforced Liquid Roof Penetration Flashing JHA

Worked instructional example

Work and worksite

A roofing crew forms a reinforced two-component liquid flashing around one accepted metal roof penetration on a compatible existing single-ply membrane. The selected JM system requires substrate-specific preparation and primer, dry-fitted scrim, controlled mixing and cure. No penetration opening or equipment support is cut or altered. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- Partial flashing coverage: a compatible liquid resin and reinforcing scrim detail; no sheet-membrane hot-air welding, penetration creation or structural equipment work.
- The actual membrane, metal surface, system detail and adhesion requirements are approved; active services and the penetration remain protected.
- The crew has current product instructions and SDS, accepted roof access and fall controls, ventilation and weather conditions suitable for application and cure.

Questions before work

- Which preparation and primer apply to the membrane and metal surfaces, and who resolves doubtful adhesion?
- How will packaged components, mixing and working time be controlled under actual temperature conditions?
- What keeps the reinforced detail dry, undisturbed and restricted until its cure and inspection requirements are met?

Task Hazard Control

1 Accept compatibility and application conditions

Hazard: An incompatible substrate or damp surface can produce a failed bond beneath a finished-looking detail.

Control: Identify the existing membrane and penetration and accept the system detail with the responsible people. Check weather, surface dryness, temperature and dew-point criteria from current instructions; resolve doubtful adhesion before preparation.

Verification: Roof lead records the approved materials, detail and actual application conditions.

Reasoning: A liquid that sticks briefly may still lack the required long-term compatibility and bond.

2 Prepare the accepted flashing surfaces

Hazard: Abrasion, solvents and loose coatings can injure workers or damage adjacent membrane.

Control: Mask the approved area and perform substrate-specific preparation with assessed dust and tool controls. Use the required cleaners with SDS-based ventilation and protection, control ignition sources and leave accepted surfaces clean and dry without enlarging the repair.

Verification: Installer checks prepared metal and membrane against the actual system criteria before priming.

Reasoning: Metal and membrane require different preparation; a generic wipe does not accept both.

3 Dry fit reinforcement and prime each substrate

Hazard: Unplanned fabric cuts or an incorrect primer can leave voids or expose workers to chemicals.

Control: Precut and dry-fit the specified clean scrim to the accepted detail and overlaps. Remove it to protected storage, apply each substrate's compatible primer and verify its prescribed flash-off or cure before resin application.

Verification: Lead records scrim fit, primer identity and surface readiness for the selected system.

Reasoning: Preparing reinforcement first reduces rushed cutting during the resin's limited working period.

Complete the work and hand over

4 Mix the identified resin components

Hazard: Incorrect component mixing or an expired working period can cause poor cure and chemical exposure.

Control: Use the actual packaged-component procedure, compatible mixing equipment and SDS controls. Record the mix start and applicable working time, prevent contamination and unauthorized dilution, and reject material that exceeds its usable conditions.

Verification: Installer confirms component identity, uniform mix and the working-time record before application.

Reasoning: Resin appearance alone does not establish correct proportion, mixing or remaining working time.

5 Embed and cover the reinforcement

Hazard: Dry fabric, wrinkles and trapped voids can interrupt the waterproof detail.

Control: Apply the specified resin, seat the pre-fitted scrim and fully embed and cover it according to the detail. Maintain the required coverage and transitions, avoid air pockets and protect the wet work from traffic, rain and contamination.

Verification: Lead checks saturated reinforcement, overlaps, coverage and the controlled cure area.

Reasoning: The reinforcement must form part of a continuous resin detail rather than sit dry beneath a top coat.

6 Accept cure and release the detail

Hazard: Premature use or hidden discontinuities can damage the flashing and expose the next crew.

Control: Maintain protection through the actual cure conditions and inspect the completed detail by the system requirements. Record defects and repairs, collect chemical waste as directed and release the area only after the required inspection and cure are accepted.

Verification: Roof lead records the cure disposition, detail acceptance and any remaining restriction.

Reasoning: Dry-to-touch material does not automatically meet all requirements for traffic or weather exposure.

Pause and reassess

- Pause for unverified compatibility, poor adhesion, wet surfaces or conditions outside the actual system limits.
- Stop for inadequate ventilation, wrong primer, expired mixed material or incomplete reinforcement.
- Opening a new penetration or altering its supporting equipment requires a separate work scope.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Precut and dry-fit the specified clean scrim to the accepted detail and overlaps. Remove it to protected storage, apply each substrate's compatible primer and verify its prescribed flash-off or cure before resin application.

Needs improvement: Check that everything is ready.

More useful: Identify the existing membrane and penetration and accept the system detail with the responsible people. Check weather, surface dryness, temperature and dew-point criteria from current instructions; resolve doubtful adhesion before preparation.

Decisions that change the analysis

Why is this separate from welded TPO curb flashing?

This develops substrate-specific priming, packaged liquid mixing, embedded scrim and controlled chemical cure. The welded sheet detail forms its junction by hot-air fusion and does not establish these liquid-system controls.

What must the crew record for actual use?

Identify the actual equipment and work boundaries, responsible people, applicable criteria, inspection findings and open actions. Resolve changes with affected crews and obtain required project authorization before work.

Training needs

- Demonstrate the specified system's preparation, primer selection, reinforcement fit, mixing and cure acceptance.
- Verify instruction on actual SDS exposure controls, tools, chemical waste and protected roof work positions.

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

References and adaptation

JM Single Ply Liquid Flashing installation guide RS-7123

https://www.jm.com/content/dam/jm/global/en/commercial-roofing/Installation-Application_Guides/RS-7123-SP-Liquid-Flashing-Installation-Guide.pdf

OSHA 1910.1200 Hazard communication

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200>

OSHA 1926.300 Hand and power tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

OSHA 1926.501 Duty to have fall protection

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.501>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.