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SBC Roof Series: EPDM Roofing Inspection

When inspecting an EPDM (ethylene propylene diene monomer) roof, it's essential to thoroughly examine various components to ensure the roof's integrity and performance. Here's an inspection checklist for an EPDM roof:

1. Membrane condition:

- Check for any cuts, tears, punctures, or visible damage on the membrane surface.
- Look for signs of shrinkage, blistering, or areas where the membrane has pulled away from flashing and termination points.

2. Seams and flashings:

- Inspect all seam connections for proper adhesion and signs of separations or lifting.
- Check flashings for secure attachment and intact sealant at penetration points and edges.

3. Structural details and penetrations:

- Inspect roof edges, corners, and penetrations for signs of water intrusion and deterioration.
- Ensure that any curbs, parapet walls, and HVAC penetrations are properly flashed and sealed.

4. Drainage and roof accessories:

- Verify that roof drains, gutters, scuppers, and other water management features are free of debris and functioning as intended.
- Check the condition of walkway pads, roof access hatches, and other accessories for damage or displacement.

5. Membrane fasteners and terminations:

- Inspect the condition and tightness of fasteners and termination bar attachment points.
- Ensure that mechanical attachments and adhesives at perimeter and penetration points are secure and watertight.



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6. General condition and maintenance:

- Look for signs of ponding or standing water on the roof surface.
- Check for any debris, vegetation, or other objects that may obstruct drainage or damage the membrane.

7. Interior inspection (if applicable):

- If accessible, inspect the interior of the building for any signs of water intrusion or damage that may be related to the roof condition.

8. Documentation and historical inspection records:

- Review previous inspection reports and maintenance records to identify any recurring issues or patterns that require attention.

By using this comprehensive checklist, you can effectively assess the condition of an EPDM roof and identify any maintenance or repair needs to ensure its long-term performance and weather resistance.



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CORE SAMPLES

A core sample for a built-up roof (BUR) is a method of evaluating the condition and composition of the different layers within the roofing system. It involves taking a cylindrical sample, typically several inches in diameter, from the roof surface down through the various layers, including the membrane, insulation, and substrate.

A core sample is typically several inches in diameter and can vary in depth based on the specific requirements of the evaluation or assessment being conducted.

The typical dimensions for a core sample would range from approximately 2 inches to 4 inches in diameter. As for the depth, it's common for core samples to extend through all the layers of the roofing system, reaching from the surface membrane down to the roof deck. The depth may vary depending on the specific layers being evaluated, but a standard core sample would often extend from the surface through the insulation, vapor barrier, and other relevant layers, providing a comprehensive view of the roof's construction and condition.

The process of taking a core sample involves the following steps:

1. **Locating the Sampling Area:** The area for the core sample is selected based on the need to assess the overall condition of the roof. It may be chosen to represent a typical section of the roof or a specific area of concern.
2. **Preparing the Equipment:** Core sampling equipment, including a coring drill or cutter, is prepared to ensure that it is in good condition and appropriate for the specific roofing materials being sampled.
3. **Cutting the Core:** Using the coring equipment, a cylindrical sample is cut and extracted from the roof surface, typically through all layers down to the roof deck.
4. **Extraction and Analysis:** The core sample is carefully extracted, labeled, and then analyzed to assess the condition of the roofing materials, such as the thickness of each layer, the presence of moisture, signs of degradation, or the adherence of the layers.
5. **Documentation:** The findings from the core sample analysis are documented, and the information can be used to assess the overall condition of the roof and to guide decisions regarding repair, maintenance, or replacement of the BUR system.

Core samples provide valuable insights into the condition and composition of a BUR system, allowing for informed decisions and proactive maintenance to ensure the performance and longevity of the roof.



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Repairing a core sample typically involves filling the void left by the removed core with appropriate replacement materials. Here's a general process for repairing a core sample from a BUR roof:

1. **Preparing the Core Hole:** The area where the core sample was taken should be cleaned and any loose debris should be removed. The edges of the core hole should be inspected for any damage or imperfections.
2. **Replacement Materials:** Depending on the original construction of the roof, the replacement materials may include layers of insulation, asphalt or bitumen, felts or fabrics, and surfacing materials such as gravel or mineral cap sheets.
3. **Layering and Adhesion:** The replacement materials should be layered in a manner that replicates the original construction of the roof. This may involve the use of hot asphalt or cold adhesive to adhere the materials together and provide a cohesive seal.
4. **Compaction and Finishing:** After the replacement materials are in place, they should be compacted to ensure a proper seal and to match the level of the surrounding roof surface. The area can then be finished with surfacing material if applicable.
5. **Seam and Joint Inspection:** Any seams or joints in the repaired area should be carefully inspected to ensure that they are securely bonded and watertight.
6. **Final Inspection and Documentation:** Once the repair is complete, a final inspection should be performed to verify that the repaired area meets the expected standards. The repair should be properly documented for future reference.

It's important to follow manufacturer's guidelines and industry best practices when making repairs to a BUR roof. Additionally, local building codes and regulations should be adhered to throughout the repair process.



* Check with a licensed roofing contractor for additional information.