



Brad Hays



## SBC Roof Series TPO Roof Inspection

To inspect a TPO (Thermoplastic Polyolefin) flat roof system effectively, you would need to follow a thorough inspection checklist that covers all aspects of the roofing system. TPO roofs are known for their durability and resistance to UV rays, but they must be regularly inspected to ensure there are no issues that could lead to leaks or other damage.

Here's a sample inspection checklist for a TPO flat roof system:

### TPO Flat Roof Inspection Checklist

#### 1. Visual Inspection:

- **General Condition:** Note any signs of obvious damage, wear, discoloration, or material degradation.
- **Flatness:** Look for any areas of water pooling, which may indicate poor drainage or depression in the insulation.
- **Seams:** Check the integrity of the seams and ensure they are not coming apart, lifting, or showing signs of weakness.
- **Flashings:** Inspect all flashing at walls, curbs, and penetrations. Make sure they are secure and not peeling up or cracking.
- **Edges and Perimeter:** Ensure that the metal edge detail, coping, and termination bars are not loose or damaged.

#### 2. Surface Check:

- **Membrane Condition:** Check for blisters, punctures, cuts, or scrapes in the TPO membrane.
- **Surface Wear:** Look for any thinning areas, scuff marks, or areas with granule loss (if applicable).
- **Embedded Items:** Remove any debris, such as leaves, branches, or other materials that could puncture the membrane.

#### 3. Penetration and Accessory Inspection:

- **Pipe Boots and Stacks:** Ensure that seals and storm collars are tight and free of gaps.
- **HVAC Units:** Check for proper flashing and that no lines or ductwork are causing stress points on the membrane.
- **Vents and Drains:** Clear out any blockages and ensure the clamping rings are properly secured.



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#### ***4. Leakage Check:***

- **Interior Inspection:** Look for any signs of water stains on the ceiling, walls, or insulation beneath the roof.
- **Insulation Integrity:** Check for soft spots on the roof where insulation may be wet and deteriorating.

#### ***5. Mechanical Fastening:***

- **Inspection of Fasteners:** Ensure that mechanical fasteners are not backing out (observable from the top of the membrane).
- **Attachment Integrity:** Confirm sufficient fastener density and pattern as per the design specifications.

#### ***6. Welds and Seams:***

- **Test Welds:** Perform a probing test on welded seams to ensure welds are intact.
- **Visual Inspection:** Look for any discolored or fishmouthed seams that may indicate poor welding or seam stress.

#### ***7. Drainage:***

- **Gutters and Downspouts:** Inspect for clogs, secure attachments, and adequate flow away from the building.
- **Internal Drains:** Make sure they are free of blockages and that the strainers are in place and secure.

#### ***8. Repair and Maintenance Logs:***

- **Documentation:** Review any past repair logs or maintenance work to check for recurring issues or newly installed features.

#### ***9. Safety:***

- **Fall Protection:** Confirm that proper safety protocols are followed and that there are designated tie off points.

#### ***10. Environmental and Installation Factors:***

- **Age of Roof:** Consider the age of the roof and compare its condition against typical lifespan for TPO roofing.
- **Installation Quality:** Assess any workmanship flaws that may contribute to premature wear or failure.



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### Notes:

- Photograph all findings.
- Document the date, weather conditions, roof access points used, and inspectors present.
- Label areas in need of repair or further evaluation.
- Create a roof plan marking locations inspected and any issues found.

### Follow-Up:

- **Immediate Repairs:** Address any urgent issues immediately to prevent water ingress.
- **Report:** Generate a detailed report with findings, recommendations, and action plans.
- **Maintenance Plan:** Recommend a regular maintenance plan based on the inspection findings.



Ensure that all inspections are carried out by trained professionals who are familiar with TPO roofing systems and adhere to the relevant safety guidelines. Regular inspections can help detect and mitigate problems early, increasing the lifespan of the roof and reducing overall maintenance costs. Check with a licensed roofing contractor for additional information.



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## HAIL INSPECTION:

Here are some items that might be included:

1. **Visual examination:** Inspect the TPO membrane for signs of damage, including punctures, tears, or indentations caused by hail impact. Walk the entire roof surface to check for any visible issues.
2. **Record the date:** Note the date of the inspection for documentation purposes.
3. **Measure hail size:** If possible, determine the size of the hail that impacted the roof. This information can be useful for assessing the potential impact on the TPO membrane.
4. **Check flashings and edge details:** Inspect the flashings, edge metal, and other trim details for any signs of damage or displacement caused by hail.
5. **Inspect roof accessories:** Verify the condition of roof accessories such as walkway pads, pipe boots, and roof drains to ensure they have not been damaged by hail.
6. **Document findings:** Take photographs or video footage of any hail damage observed during the inspection. This documentation can serve as evidence for insurance claims or repair needs.
7. **Water test:** If hail damage is suspected, conduct a water test to identify potential leaks or vulnerabilities in the TPO membrane caused by hail impact.

It's important to note that while this checklist provides a starting point for hail inspection, professional assessment and repair by a qualified roofing contractor may be necessary if damage is suspected. Additionally, specific inspection requirements may vary based on the severity of the hail event and the individual characteristics of the TPO roof.



\* Check with a licensed roofing contractor for additional information.



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## WIND INSPECTION:

Here's a general wind inspection checklist for a TPO roof:

1. **Visual examination:** Inspect the TPO membrane for any signs of wind damage, such as uplifted or displaced sections of the membrane. Walk the entire roof surface to check for any visible issues.
2. **Check flashing and edge details:** Inspect the flashings, perimeter edge details, and other trim components for signs of wind-related damage, including uplift or displacement.
3. **Roof accessories:** Verify the condition of roof accessories such as walkway pads, pipe boots, and roof drains to ensure they have not been affected by wind uplift or displacement.
4. **Check fasteners:** Inspect fasteners used to secure the TPO membrane and ensure they are properly seated and not damaged or missing due to wind forces.
5. **Record the date:** Note the date of the inspection for documentation purposes.
6. **Document findings:** Take photographs or video footage of any wind-related damage observed during the inspection. This documentation can serve as evidence for insurance claims or repair needs.
7. **Water test:** If wind damage is suspected, conduct a water test to identify potential leaks or vulnerabilities in the TPO membrane caused by wind uplift.

As with any inspection, it's crucial to engage with a professional roofing contractor if damage is suspected. Additionally, adherence to specific inspection requirements and any necessary repairs should align with manufacturer guidelines, local building codes, and regulations.



\* Check with a licensed roofing contractor for additional information.