

How Hot Summer Weather Impacts Your Roofs—And What You Can Do About It

Summer heat isn't just tough on people—it's tough on your built-up (BUR) and single-ply roof systems, too. Rising temperatures, UV exposure, and constant expansion and contraction can take a serious toll if you're not keeping up with maintenance. The good news? A little proactive care can help you avoid expensive repairs down the road. Here's what to watch for and how to protect your roof.





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1

Your Roof Expands and Contracts—A Lot

BUR and single-ply membranes and flashings swell in the heat and shrink as temperatures drop at night or during inclement weather events such as hail storms. Over time, this movement or impact weakens seams and materials.



-  **What can go wrong?** Cracking, splitting, and seam failures—especially around penetrations and joints.
-  **What to do about it?** Inspect regularly for gaps and ensure expansion joints are flexible and properly installed.



2

UV Rays Speed Up Roof Aging

Just like sun exposure damages skin over time, it also wears down your roof. UV radiation can make materials brittle, causing them to crack and break down faster.

-  **What can go wrong?** Surface erosion, faster aging, and deteriorating protective coatings.
-  **What to do about it?** Maintain or apply reflective roof coatings to block UV damage and extend roof life.





3 Your Roof Gets Incredibly Hot

A dark BUR surface can hit **150°F or more** under direct sunlight, and single-ply roofs—especially dark-colored membranes like EPDM—absorb similar amounts of heat. That extreme heat speeds up material breakdown.

✗ What can go wrong? Asphalt layers in BUR degrade faster, adhesives fail, and insulation weakens. For single-ply roofs, heat accelerates membrane aging and can cause thermal expansion stress.

✓ What to do about it? Use cool or reflective roof coatings on your existing BUR and single ply roofing systems to reduce heat absorption and lower energy costs.



5 Flashing and Sealants Take a Beating

Hot temperatures dry out adhesives and weaken flashing bonds, making BUR and single-ply roofs more vulnerable to leaks—especially during summer storms.

✗ What can go wrong? Flashings peel away, sealants crack, and water infiltration increases.

✓ What to do about it? Inspect and reseal flashings, drains, and expansion joints to keep everything watertight.



4 Trapped Moisture Leads to Blisters

If moisture gets trapped in your roof system, summer heat can turn it into vapor, creating pressure pockets that weaken the membrane.

✗ What can go wrong? Blisters, bubbles, and membrane separation—eventually leading to leaks in both BUR and single-ply systems.

✓ What to do about it? Fix any moisture issues early and investigate the viability of restoration of the older existing roof systems with high-performance fluid-applied membrane systems.



6 Summer Maintenance Can Cause Damage

Increased rooftop activity—like HVAC maintenance or inspections—can cause accidental wear and tear.

✗ What can go wrong? Punctures, membrane damage, and weakened surface protection, especially in single-ply systems, which can be more susceptible to punctures than BUR.

✓ What to do about it? Use designated walk pads and limit rooftop access to necessary personnel only.

Stay Ahead of the Heat Hot weather is tough on BUR and single-ply roof systems, but regular inspections and proactive maintenance can keep your roof in top shape. By staying on top of these potential issues, facility managers can extend the life of their roofs and avoid expensive surprises.

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