

Toolbox Talk Training: Potentially Hazardous Effects of Weather on Portable Ladder Safety

Just like nature slowly breaks mountains down into smaller and smaller pieces over time, weather also has a gradual but powerful effect on portable ladders. Wind, rain, heat, and cold can all contribute to wear and damage that may not be immediately visible but can still make a ladder unsafe. Today we'll look at how weather can affect ladder safety and what we can do to reduce those risks.

- Wet conditions increase slip hazards. Wet ladders are more slippery than dry ones, making it easier for boots—especially muddy soles—to slip off rungs. Wet ground also reduces friction at the ladder base, increasing the chance of the ladder sliding out of position.
- Moisture causes long-term deterioration. Repeated exposure to rain, humidity, or moisture can slowly corrode metal parts such as rivets, spreaders, and fasteners. Over time, this weakens structural integrity and can lead to bending or failure. Moisture can also damage or remove safety labels and warning stickers, making important instructions unreadable.
- Water damage can weaken non-conductive materials. Wooden ladders exposed to standing water can become waterlogged. This not only accelerates deterioration but can also turn a normally non-conductive ladder into a conductor of electricity, increasing the risk of electrocution when working near energized equipment.
- Freezing temperatures create ice hazards. When moisture combines with cold weather, ice can form on ladder rungs and the ground surface. Ice greatly increases the risk of slipping—far more than wet surfaces alone.
- Sun exposure causes long-term material breakdown. Prolonged exposure to ultraviolet (UV) rays can gradually weaken wood and fiberglass ladder materials. UV light also causes labels and warning stickers to fade, making them difficult or impossible to read over time.
- Wind can create instability. Strong or sudden wind gusts can cause ladders to shift, tip, or even fall—whether someone is on the ladder or not. Extension ladders should always be secured at the top, and ladder use should be avoided during high winds.

While these are not all possible weather-related hazards, they are some of the most common conditions that can affect both ladder safety and durability.

Can anyone share additional examples of how weather conditions can create hazards when using portable ladders? Thank you for your participation. Please remember to sign the training certification form before leaving so you receive credit for attending today's training session.

