EMPLOYEE SAFETY UPDATE

Portable ladders: Inspections

To be sure there are no defects or damaged parts that would make it unsafe, a ladder should always be examined before it is used. The inspection is easy to do and should only take a few minutes to complete.

All ladders must be inspected to make sure that:

- There are no missing rungs (also called cleats or steps), and the rungs can't be moved by hand.
- Rungs and side rails are free of grease and oil.
- All hardware, fittings and connectors are securely attached.
- There are no cracked, split or broken side rails, rung braces or rungs, and no sharp edges or splinters on rungs or side rails.
- If equipped, there are no damaged or worn endcaps or anti-slip shoes on the side rail footings.
- Joints between rungs and side rails are tight and can't be moved by hand.

If a ladder falls over or is dropped, make sure it is free of dents, cracks or bends in the side rails or rungs. Check for damaged connections of rungs to the side rails and for sheared rivets connecting parts of ladders and ensure there's no damage to any other hardware connections.

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Extension ladders have unique parts for routine inspection. Inspect often to make sure that:

- The rung locks are intact and functional, with no loose, broken or missing parts. Check that the locks seat properly and that the lock flippers work when extending and retracting the top section of the ladder. All sharp points on the locking device must be covered or removed.
- All moveable parts operate freely without binding or undue play.
- There are no frayed, excessively worn or damaged ropes or parts of rope or pulley systems, and there are no missing, broken or weakened cleats, rungs or treads by placing the ladder flat on the ground and walking on it.

Wooden ladders and ladders with wooden parts should be free of sharp edges, splinters, splits or decay in the side rails or rungs. If you suspect decay, carefully probe the area with a sharp object for excess softness. Also inspect to make sure that:

- There's no opaque paint or coating that could cover a defect or damage.
- There are no loose nails, screws, bolts or other connectors.
- There are no holes or knots in the wood.

Check **metal ladders** for:

- Damage from corrosion
- Dented rungs or side rails
- Any loose or sheared metal parts, including bolts, screws and rivets

Inspect fiberglass or plastic ladders for deformed side rails or rungs from chemicals or heat.

All ladders with defects or damage must be clearly tagged or marked "DANGEROUS — DO NOT USE!" and placed somewhere they won't be mistakenly used until they are either repaired or discarded.

Clearing snow, the 'green' way

Snow can be a significant source of water pollution because it accumulates a variety of contaminants, including salts and salt additives, heavy metals, asbestos, petroleum products (such as oil and grease), nutrients, bacteria, organic chemicals (such as pesticides and polychlorinated biphenyls), soil materials and litter. It's important to know how to clear snow without it entering the groundwater and harming the environment.

Salt, a commonly used ice melt, can be minimized by more frequent plowing and using more environmentally friendly alternatives, such as sand. When searching for an ice melt other than salt or sand, look for one that combines corrosion inhibitors like calcium magnesium acetate (CMA), which is made from limestone and acetic acid, or Ice Ban® with salt to make it gentler while still being effective. CMA has been reported to have less environmental impacts. Do not over-pour as using too much salt can be counterproductive and leave behind a slippery brine.

Ideally, salt and sand should be stored in an enclosed building with a foundation. Outdoor salt stockpiles should be protected from precipitation with a cover made of canvas, heavy tarpaulin or another protective material.

Use a shovel or a broom, if possible, to clear snow. When you can't, use a battery-operated, electric or hybrid snowblower. Battery- or electric-powered snowblowers consume energy and not gas, which limits air pollutants. If the area to clear is too large, use the most gas-efficient snowblower or plow available.

Snow disposal sites should be in areas where there's an adequate depth of topsoil (approximately 2 feet) between the ground surface and water table to act as a filter. Areas with fractured bedrock present near the surface shouldn't be used as disposal sites because of the potential for direct groundwater contamination.

RESPIRATORY PROTECTION: PERFORMING SEAL CHECKS

Before using a respirator, you need to check its seal under both positive and negative pressure.

To perform **a positive-pressure seal check**, start by making sure the straps are adequately tightened to provide a proper seal and that the respirator fits comfortably, then perform the following steps:

- Close off or cover the exhalation valve. Keep in mind that some respirators might require you to remove the exhalation valve cover to adequately close or cover the valve.
- Gently exhale into the respirator. If a slight positive pressure builds up so that the facepiece slightly inflates and there's no evidence of outward leakage, then the seal is considered adequate.

For a **negative-pressure seal check**, perform the following steps:

- Begin by closing off or covering the inlet opening of the cartridges or canister by covering it with your palms or by replacing the filter seals. Again, some respirators might require you to remove the cartridges to adequately close or cover the inlet.
- Next, gently inhale so that the respirator collapses slightly, and hold your breath for 10 seconds. The respirator seal is considered adequate if your facepiece remains slightly deflated for the 10 seconds that your breath is being held and there's no evidence of inward leakage.

To complete **a seal check with a disposable respirator**, such as an N95, perform the following steps:

- Place both hands over the respirator and block the valve if there is one.
- Take a deep breath in and then out. The respirator seal is considered adequate if the facepiece collapses slightly on the inhale and doesn't leak on the exhale.

PPE: IT ONLY WORKS IF IT FITS

The type of personal protective equipment (PPE) that's required for a job depends on the type of work. For example, in areas where flying particles or projectiles are likely, goggles must be used to protect your eyes. Similarly, if you work in an area with floors that are often wet, you may need shoes with slip-proof soles.

Don't begin a task that requires the use of PPE without understanding and acquiring the necessary equipment. You may be tempted to work without a PPE if it is uncomfortable, doesn't fit right or makes it harder for you to complete the task at hand. Your PPE is designed to protect you, but it only functions effectively when you are wearing one that fits properly.

- **If your PPE doesn't fit properly, speak to your supervisor immediately**. Some types of PPE, such as eye protection, gloves and respirators, must fit properly to be effective.
- **If your PPE fits well enough to adequately protect you but is uncomfortable, talk to your supervisor about alternatives**. You can try out several different types to see if there's one that feels better.
- **If you have any other concerns about the required PPE, speak to your supervisor so the issue can be addressed.**

Inspect your PPE before each use. Don't use any equipment that's damaged, and be sure to report any damaged, lost, or worn-out PPE to your supervisor.

CONFINED SPACE ATTENDANT: UNDERSTANDING YOUR RESPONSIBILITIES

Your responsibilities as the attendant at a permit-required confined space include:

- Having a copy of the permit to know who is authorized to enter the space.
- Remaining outside the permit space during entry operations, unless relieved by another authorized attendant.
- Only performing a rescue while remaining outside the space and only as specified by the nonentry rescue procedure as outlined in the permit. If you can't safely perform the nonentry rescue, contact rescue services.
- Knowing the existing and potential hazards in the space, including information on the mode of exposure, signs of danger or symptoms of exposure, consequences and physiological effects. Air monitoring may be part of the attendant's job.
- Always maintaining communication with entrants and keeping an accurate account of workers entering the permit space when multiple entrants are allowed.
- Calling for rescue and other services during an emergency.
- Making sure your cellphone or other communication device is working properly and that you have all the emergency contact information. Never leave your post to make a call.
- Making sure unauthorized people stay away from permit-required spaces.
- If an unauthorized person somehow gets into the permit space, telling the authorized entrants and the entry supervisor.
- Performing no other duties that interfere with the attendant's primary duties.

Chemical spotlight

Furfurylamine

Furfurylamine is a light, straw-colored liquid. It's used to make other chemicals.

Furfurylamine isn't compatible with oxidizing agents, strong acids, acid chlorides, acid anhydrides and carbon dioxide. Store furfurylamine in tightly closed containers in a cool, well-ventilated area. Sources of ignition are prohibited where the chemical is used, handled or stored. Metal containers involving the transfer of furfurylamine should be grounded and bonded.

If furfurylamine is spilled or leaked, avoid breathing vapors, mist or gas, and ensure adequate ventilation. Remove all sources of ignition and evacuate personnel to safe areas. Use personal protective equipment (PPE), including goggles or safety glasses, gloves, flame-retardant protective clothing and respiratory protection.

Prevent further leakage or spillage if safe to do so, and don't let the product enter drains, sewers, underground, confined spaces, groundwater, waterways or discharge into the environment. Absorb liquids in vermiculite, dry sand, earth or a similar material, and deposit in sealed containers. Ventilate and wash the area after cleanup is complete. It may be necessary to contain and dispose of furfurylamine as a hazardous waste.

Contact the federal Environmental Protection Agency (EPA) and local environmental regulatory agency for specific recommendations.