

Fall protection—ladder safety guidelines



Ladders are a great tool to complete different types of work projects, but can also contribute to a variety of injuries and possibly death, if they are not properly used and maintained. The information and guidelines below are provided in an effort to improve safety of anyone using a ladder in their daily work activities.

LADDER TYPES AND SELECTION

The most common types of ladders found and used in construction are portable stepladders and extension ladders. A less commonly found type would be fixed, job-made ladders, usually constructed of wood. Ladders commonly come in three materials: aluminum, wood or fiberglass. Aluminum is the most durable, but will conduct electricity, which makes it dangerous for use around electricity. Wood ladders may rot. Fiberglass is the best combination of durability and non-conductivity, but is also the most expensive. Portable ladders are most common and have ratings related to their working capacity.

There are three basic portable ladder types:

- **Type I—Industrial:** Heavy duty with a load capacity not more than **250 pounds**.
- **Type II—Commercial:** Medium duty with a load capacity not more than **225 pounds**.
(Suited for painting and similar tasks.)
- **Type III—Household:** Light duty with a load capacity of **200 pounds**.

There are many types of ladders available on the market. If it is intended to be portable and used by a single person, it should fit into one of the three basic categories above. Only choose ladders with the UL seal from Underwriters Laboratory®.

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SAFE LADDER USE

- Make sure the ladder is suited for the type of job you plan to do (see the types above).
- Before using a ladder, especially a ladder that has been in storage for a while, inspect it for cracks or broken joints.
- Place your ladder on a stable, even, flat surface. Never place a ladder on top of another object.
- Use the 1:4 ratio to ensure a stable working platform. Place the base of the ladder 1 foot away of whatever it leans against for every 4 feet of height to the point where the ladder contacts at the top.
- When using an A-frame stepladder make sure the brace is locked in place.
- If climbing onto another surface, make sure the ladder extends at least 3 feet past the platform onto which you're climbing.
- Secure tall ladders by lashing or fastening the ladder to prevent movement.
- Always face the ladder when climbing or descending.
- Keep both feet on the ladder, never put one foot on a rung and the other foot on a different surface.
- Maintain three-point contact (one foot and two hands or one hand and two feet) when ascending or descending. Nothing should be carried in hand up or down a ladder.
- Do not climb higher than the second rung on stepladders or the third rung on straight or extension ladders.
- Never stand on the top or the paint shelf of a stepladder.
- Keep your belt buckle, if you have one, positioned between the rungs so it doesn't catch.
- Never leave ladders unattended.
- When working with electricity, use a ladder made of wood or fiberglass.
- Job-made ladders should be constructed in consultation with competent persons with an engineering background to ensure proper specifications for construction are followed for the work and area to be installed.

MAINTAINING LADDERS

When not in use, ladders should be properly stored to prevent damage. When possible, ladders should be stored inside clean, dry areas. Ladders should not be stored piled on top of one another. All ladders, but especially metal ladders, should never be stored or leaned against any type of electrical panel.

Ladders should be inspected regularly. Stepladders and extension ladders should be inspected for broken or frozen joints or latches. Aluminum ladders should be inspected for cracks and broken welds. Aluminum ladders should also be inspected for rough spots and burrs before first use.

Wooden ladders should be inspected for cracked wood, splinters and rot. Look for broken or loose hardware.

Protect wooden ladders with linseed oil or clear sealant. Never paint a wooden ladder—the paint may hide imperfections, such as rot or cracks.

Fiberglass ladders are protected with a clear sealant. If the fiberglass is damaged through the sealant, sand lightly before applying another coat of lacquer.

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OSHA Regulation 1926.1053 provides the following rules for defective ladders:

- Portable ladders with structural defects—such as broken or missing rungs, cleats, or steps, broken or split rails, corroded components or other faulty or defective components—will immediately be marked defective or tagged with **Do Not Use** or similar language and withdrawn from service until repaired.
- Fixed ladders with structural defects—such as broken or missing rungs, cleats, or steps, broken or split rails or corroded components—will be withdrawn from service until repaired.
- Defective fixed ladders are considered withdrawn from use when they are immediately tagged with **Do Not Use** or similar language, or marked in a manner that identifies them as defective, or blocked, such as with a plywood attachment that spans several rungs.
- Ladder repairs will restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.

SUMMARY

There should be guidelines established for all ladders with regard to when or if a defective ladder should be repaired. The best solution is to tag the ladder as defective and discard ladders when they are found to be in disrepair. All employees should be instructed in the proper use and selection of ladders for the work they are performing. Employees should also be instructed to inspect the ladder each day prior to use and what to look for when completing the inspection.

Ladders are an effective tool to complete a variety of work projects. By following the above guidelines, employee safety should be improved and, more importantly, it will be less likely that severe injuries may occur. If there are any questions related to the above information, please feel free to call your United Fire Group (UFG) risk control representative.

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