

## Ladders

**Introduction:** Ladders are an important and versatile piece of equipment commonly seen around most jobsites. Ladders come in many different varieties such as straight ladders, extension ladders, fixed ladders, frame ladders, job-built ladders, and step ladders. Although a ladder seems simple enough to use, unsafe ladder practices can lead to serious injuries. Falls are the primary hazard involving ladder use.

**A fall from a ladder can result from a number of reasons:**

- **Unprotected ladders** set up in opening doorways or high traffic zones can be bumped into or knocked over, causing a fall.
- **Employees can slip** or lose their balance while climbing or by over reaching while working on top of a ladder.
- **If a ladder** is not set up properly, it can shift, causing the person on the ladder to fall.
- **Failure** from overloading or damage.
- **Slippery substances** such as oil or grease on rungs can also cause slips and falls.
- **There is always** the hazard for a falling object from workers carrying tools or material up a ladder.
- **Weather conditions** can affect safety on ladders used outside.

**Virtually all ladder injuries can be avoided if employees are properly trained in the safe use of ladders.**

**For safe ladder use observe these guidelines and regulations:**

- **Always inspect** any ladder for damage or defect prior to use. Inspect for broken or missing rungs or steps, broken or split side rails, defective or missing safety feet, corrosion, securely fitting components between steps and side rails, rungs that are free of grease and oil, and no splinters or sharp points that may snag clothing. Check that moving parts operate freely without binding or excessive play, wheels or pulleys are properly lubricated, and any frayed or worn ropes on extension ladders are replaced.
- **If upon inspection**, faulty or defective components are discovered, the ladder must be immediately tagged and removed from service. The ladder may not be returned to service until repairs equal to original manufacturer's specifications are made.
- **Use only ladders** meeting length and load limit requirements for the given application.
- **Never use** metal ladders near electrical lines, equipment, or switch gear. Electric Arc welding must not be done from a metal ladder.
- **Always set up** a ladder on stable, solid surfaces. Never place ladders on boxes, blocks, or crates to extend reach.
- **Never stand** on the 4 top rungs of a straight or extension ladder, or on the 2 top steps of a step ladder.
- **Hoist tools** and other material up after reaching the top of the ladder. Use of tool belts helps to manage tools while working from a ladder.
- **Always observe** the 3 – point rule when ascending or descending a ladder: keep 2 hands and 1 foot, or 1 hand and 2 feet in position at all times.
- **Never over-reach** while working from a ladder. Work with your body within the ladder's side rails. Descend and reposition ladder as needed to stay close to work.
- **Rungs or steps** on metal ladders must be treated to prevent slipping. Treatment may include being corrugated, dimpled, knurled, or coated with non-skid, slip-resistant material.
- **Ladder side rails** must extend 3 feet above the top landing. If this is not feasible due to the ladder's length, then the ladder must be securely tied off at the top to a non-moveable support and grab rails must be provided for access.
- **Never tie** different ladders together to make them longer unless specifically designed for this purpose.
- **Extension ladders** must be set at a four to one angle, with the base one foot out from the wall for every four feet of height. Extension Ladders must not be shifted, repositioned, or extended while being used.
- **When traveling** up or down ladders, always observe safe ladder techniques. Always face the ladder, use the three point contact (1 foot and 2 hands or vice versa), and never carry loads or objects that could cause you to lose your balance and fall.

**Conclusion:** OSHA regulations require specific ladder safety training. Employees who use ladders must be taught to recognize hazards relating to ladder use. Employees must understand the proper construction, appropriate selection, load limits, placement, care, and other restrictions in ladder handling. All employees must also understand OSHA requirements and be retrained as necessary to maintain their understanding of safe ladder practices. Follow these guidelines for safe ladder use.

**NOTICE:** *These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.*

