

LADDER SAFETY POLICY

Health and Safety Guidelines, January 2013

PORTABLE LADDER SAFETY

Purpose

Accidents involving ladders are common in the workplace because this tool is often abused and/or used improperly. The following section is intended to provide some guidelines and requirements for the safe use of portable ladders.

Scope

This safe work procedure relates to portable ladders only and not fixed ladders.

Common Causes of Ladder Accidents

1. Over-reaching from ladders, rather than moving them.
2. Standing ladders on boxes, etc., to gain additional height.
3. Too much haste in climbing or descending.
4. Climbing one-handed while carrying something in the other hand.
5. Standing at the very top of a short ladder, rather than getting one long enough for the job.
6. Hanging tools from ladder rungs, or leaving tools on the top of the stepladder.
7. Throwing tools to a fellow worker on a ladder.
8. Placing the ladder at an improper angle.
9. Using metal ladders in locations where contact with electric wires is possible.
10. Using worn or damaged ladders.
11. Failure to secure (tie) the ladder in place.

Ladder Standards

Portable ladder design, construction, and use must conform to the requirements of one or more of the following internationally accepted standards:

1. Canadian Standards Association Z11, "Portable Ladders", or
2. American National Standards for ladders - portable wood - safety requirements - ANSI A14.1- 1990, or
3. American National Standards for ladders - portable metal - safety requirements - ANSI A14.2- 1994, or
4. Any other such standards as are acceptable to the Worker's Compensation Board.

Ladder Ratings and Types

Portable Wood Ladders

Wood ladders should be constructed of a high-density wood that is free of sharp edges and splinters. Visual inspection should reveal no decay, or irregularities including shake, wane and compression failures or other weaknesses. Construction requirements include ladder length restrictions (see Table #1) and step spacing. Uniform step spacing must not exceed 12".

Table #1

Ladder Type	Maximum Length	Special Requirements
Type I - Industrial Stepladders	3'-20'	The minimum width between side rails at the top, inside to inside, is 11-1/2 inches. From top to bottom, the side rails must spread at least 1 inch for each foot of stepladder length. Each stepladder must have a metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in open positions.
Type II -	3'-12'	Same as above.

Commercial Stepladder

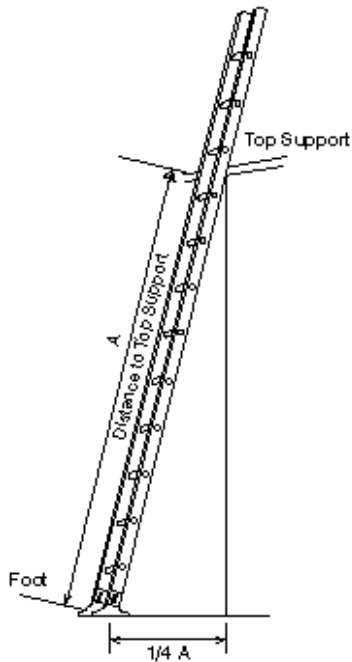
Type III - Household Stepladder	3'-6'	Same as above.
Rung Ladder	30'	None.
Two-Section Rung Ladder	60'	Ladder rails must fit into each other. Upper section can be raised/lowered.
Trestle Ladder	20'	None.
Painter's Ladder	12'	None.
Mason's Ladder	40'	None.
Side-Rolling Ladder	20'	None.

Care and usage requirements ensure the serviceability and safety of portable wood ladders. Ladders should be maintained in good condition by keeping all joints tight; lubricating all wheels, locks and pulleys; replacing worn rope; and routine cleaning. Those that are defective must be destroyed or withdrawn from service. Usage requirements involve placing the ladders at an angle so they are 1 ft. away from the wall for every 4 ft. of working ladder height (see Figure #1); allowing only one person at a time on a ladder; not placing the ladder on top of other objects to increase height or in front of doorways; and extending the ladder three feet over a point of support if climbing to a rooftop, among others.

Figure #1:

Angle of Inclination

Make sure the ladder is about 1 ft. from the vertical support for every 4 ft. of ladder height between the foot and the top support.



Portable Metal Ladders

Proper care and maintenance of portable metal ladders extends ladder life and improves user safety. If a ladder tips over, it must be inspected for damage (bends or dents, loose rivets or joints, etc.) and if defective, must be marked and taken out of service for repair. Ladders must be kept clean so they do not become slippery. Portable metal ladders are designed for use by only one person, a 200-lb. load capacity, secure footing, and support for both top rails. Like wooden ladders, metal ladders must be placed at an angle so they are 1 ft. from the wall for every 4 ft. of working ladder height (see Figure #1).

Fiberglass Ladders

Fiberglass ladders should be made of good, commercial-grade, thermosetting polyester resin reinforced with glass fibers. The following selections need to be considered and followed:

1. Electrical.
2. Corrosion resistance.
3. Outdoor weathering.
4. Thermal conditions.
5. Structural integrity.

Table #2

Ladder Type	Maximum Length	Special Requirements
Single Section Ladder	30'	The minimum width between side rails of a straight ladder or any section of an extension ladder should be 12 inches.
Extension Ladders		
Two-section	48'	The length of single ladders or individual sections of ladders should not exceed 30 feet. Two-section ladders must not exceed 48 ft. in length, and ladders of more than two sections must not exceed 60 ft. in length. Overlap stops required.
Greater than 2-SECTION	60'	
Stepladders	20'	Insulating, nonslip pads at bottom of rails. Must have locking device to hold ladder sections open.
Platform Ladder	20'	None.
Trestle Ladder/Extensions	20'	None.

Table #3

Ladder Type	Duty Rating	Description
Type 1AA Ladder	375 lb.	Extra-heavy-duty industrial ladder
Type 1A Ladder	300 lb.	Heavy-duty industrial ladder
Type 1 Ladder	250 lb.	Heavy-duty industrial ladder
Type 2 Ladder	225 lb.	Medium-duty commercial ladder
Type 3 Ladder	200 lb.	Light-duty household ladder

Electrical Work

1. Metal ladders should never be used for electrical work and they should always be kept clear of overhead power lines and electrical circuits when used for other projects.
2. The use of metal ladders should be avoided when there is a possibility that they will be used around electricity, even inadvertently.
3. Wooden ladders with metal reinforcing rods shall not be used for electrical work, due to the danger of inadvertent electrical contact.
4. When servicing energized electrical equipment, non-conductive ladders must be used.

Ladder Inspections

1. Ladders should be inspected prior to use for loose or damaged rungs, steps, rails or braces.
2. Ensure that stepladder spreaders are sturdy and can be locked in place.
3. Check ladder rungs to be sure that they are free of any slippery material.

4. Check ropes and pulleys, etc., on extension ladders for lubrication and good repair.
5. Ensure that the steps are three and one half (3 1/2) inches or more on stepladders.
6. The feet of ladders, especially straight ladders, should be equipped with slip-resistant surfaces.
7. Reject a ladder with defects. Ladders found to be defective should be taken out of service and tagged with a "Condemned - Do Not Use" tag.

Proper Ladder Use

1. The ladder should be long enough for the job and should project at least three (3) feet (90 cm) above the level of the point of support.
2. Wooden ladders should not be painted, since this may hide serious defects that may develop. A wood preservative or clear finish should be used to protect the ladder.
3. Use a straight ladder, not a stepladder if the work task requires that you need to reach a height in excess of 6 metres (20 feet).
4. Place the ladder on a solid, firm, flat surface. The feet of extension or stepladders should be level.
5. A board may be necessary to ensure that it's level or to prevent it from sinking into soft ground.
6. Keep the area around the base of the ladder uncluttered.
7. When you use a stepladder, make certain that it's fully open and that its spreader is locked securely.
8. Stepladders are not to be more than 6 metres (20 feet) high when set for use.
9. Both railings of the top section of a straight ladder must be resting on a firm support
10. Ladders should be firmly secured or "tied-off" at the top before anyone works with power equipment from the ladder.
11. Use the "4 to 1" rule with straight ladders. This simply means that the ladder should be placed (1) foot away from the base for every four (4) feet in height to the place where the top of the ladder rests.

12. Always make sure that a ladder is not placed in front of a door that opens toward the ladder unless the door is blocked, locked or guarded.
13. When using a ladder for access to high places, always securely "tie-off" the ladder to prevent it from slipping.
14. Do not place a ladder close to, or against pipes containing acid, chemicals, sprinkling systems, etc.;
15. Obtain assistance when handling a heavy or long ladder.
16. When a ladder is used to climb onto a platform or roof make certain that it extends at least three feet above the platform or roof edge contact point.
17. NEVER stand on the top two (2) rungs of ladders and NEVER stand on the top step or platform of a ladder.
18. NEVER place a ladder against an unstable surface.
19. Make sure that the locking device is fully secured on extension ladders before using them.
20. Unless a ladder is designed for additional weight, only one (1) person should be on the ladder.
21. Go up and down a ladder facing the ladder, taking only one (1) step at a time. Hold the side rails with both hands when climbing up or down a ladder. Do not hold on to the rungs when going up or down a ladder.
22. NEVER climb a ladder "one-handed" while carrying something in the other hand. Use a hand line to raise or lower large objects, tools, etc.
23. Keep your body centered between the rails of the ladder and NEVER over-reach when working on ladders.
24. Before using a ladder always check your shoe soles and ladder rungs (or steps) to ensure that they are free of any slippery material (grease, oil, paint, snow, ice, etc.).
25. Do not attempt to reach too high as you may lose your balance.
26. Do not use step-ladders or straight ladders horizontally for platforms or scaffolds.
27. Transport ladders with the feet to the rear and the top of the ladder higher than anyone in front of you.
28. NEVER "walk" a stepladder while standing on it.
29. NEVER use makeshift items such as a chair, barrel or box, etc., as a substitute ladder.

30. NEVER place a ladder against a window pane or sash. Fasten a board (do not use nails) across the top of the ladder to give a bearing surface at each side of the window.
31. NEVER slide down the side rails of ladders.
32. NEVER use ladders during strong winds or storms except in emergencies, and then only; when they are securely "tied-off".

Ladder Maintenance

1. Ladders should be inspected once every three (3) months and a record of said inspections should be kept on file for future reference.
2. Untreated wooden ladders should be stored in dry areas to prevent moisture or water absorption. When transported on a vehicle, ladders should be properly secured and supported.
3. Ladders constructed from fiberglass should be cleaned and sprayed lightly with a clear or pigmented lacquer or paste wax once every three (3) months.
4. Check all ladder hardware, nuts, bolts, spreaders, etc. for tightness and good repair.
5. Examine and replace worn or frayed ropes on extension ladders.
6. Do not attempt to straighten a bent or bowed ladder. Immediately remove from use.

Management

1. Will conduct an annual review of this policy and procedures.