

Health & Safety

for Schools Officers

Working at Heights

- Ladder safety factsheet
- Ladder checklist

Ladder Safety

Ladders have been commonly used to provide convenient access to a higher or lower level and to perform light duty tasks at height. This convenience also increases the risk of injury through incorrect use of ladders. Each year many serious injuries result from falls from ladders.

Workplace Health and Safety legislation requires that an employer provides safe plant and equipment and safe systems of work. The employer must ensure that the ladder is appropriate for the task to be undertaken, that it is appropriate for the duration of the task and that it is set up in the correct manner.

If an employee is undertaking a task that involves the possibility of a fall from height, the employer must ensure that the risk of a fall is assessed and eliminated or reduced as far as practicable.

Before Considering Using a Ladder

Give consideration to whether:

- the job can be undertaken from the ground with extension tools;
- the item being accessed can be relocated to the ground;
- the work to be undertaken, or part of it, can be accessed from the ground;
- an elevating work platform such as a scissor lift or cherry picker can be used; and
- a step platform can be used;
- A suitable ladder is available – ensure appropriate for heavy duty or industrial use (e.g. min 120 kg).

Risk Assessment Involving Use of a Ladder

If a task must be done where there is a risk of a person falling more than two metres, a risk assessment must be undertaken. The risk assessment must consider:

- The type of task and how long the task will take; and
- The physical surroundings and conditions in which the task is undertaken.

If it is proposed to use a ladder, then some factors that could be considered are:

- Is the person who will use the ladder new to the task, still in training or not trained at all?
- Will the job involve heavy work or the use of both hands to hold something?
- Will the job involve the use of tools such as stilsons or pinchbars that require a high degree of leverage and may result in someone overbalancing or falling?
- Does the task need power tools or other equipment designed to be operated with two hands?

- Will the person be required to work on the ladder for more than a couple of hours increasing the likelihood of fatigue?
- Will the task require someone to work outside the ladder stiles and possibly over-reach causing the ladder to slip sideways?
- Does the task need to be undertaken in wet weather or where the ladder surface is likely to be slippery or become slippery over time?
- Does the task need to be conducted in windy weather where the ladder may move sideways or backwards?
- Could the weight of tools and materials required to do the job exceed the ladder capacity or increase the risk of a fall occurring?
- Are the surfaces the ladder will rest on unstable in any way?
- Is anything likely to hit the ladder when it is set up such as ropes, cables, other workers, pedestrians, traffic etc?
- Is there anything stopping the ladder from being set up or secured properly?
- Is the ladder too short to allow the person to stand on a rung at least 900 mm from the top or stand on or below the second tread below the top plate?
- Does the person have to face away from the ladder when going up and down or working on it?
- Is the place for someone to stand after alighting from the ladder unsafe in any way?
- Does the ladder show any evidence of faults such as missing, cracked, broken, loose, worn or warped parts?
- Are there any other factors present that might increase the risk of a fall from a ladder?

If the answer to any of the above questions is yes, then additional measures will need to be put in place to allow the task to be done safely.

Health & Safety Fact Sheet

Setting Up a Ladder Safely

To use a ladder safely it must be used on a solid and stable surface so as to prevent the ladder from slipping. Slipping can be prevented by:

- ensuring the ladder has non-slip feet;
- placing single and extension ladders at a slope of 4 to 1, and setting up step ladders in the fully opened position; and
- securing single and extension ladders at both the top and bottom.

Using a ladder safely

People using ladders should:

- make sure that the ladder is clear of powerlines;
- set up the ladders in places where there is no chance of the ladder being hit or knocked;
- work from within the ladders stiles and not over-reach. Over-reaching can lead to the ladder tipping sideways;
- always have two hands free to climb up and down;
- not use tools that require a high degree of leverage, such as stilsons or pinch bars. This may result in overbalancing or falling;
- make sure that no one works underneath the ladder;
- not allow anyone else to be on the ladder at the same time; and ensure that there is a safe place to stand when alighting from the ladder.

Wherever possible people using ladders should always:

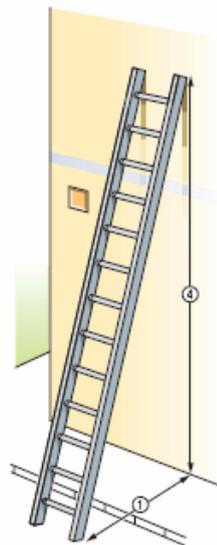
- face the ladder when going up or down or when working from it;
- stand on a rung that is at least 900 mm from the top of a single or extension ladder.

Ladder Maintenance

A ladder needs to be regularly inspected to make sure that it does not pose a risk in itself. Ladders with any of the following faults should be replaced or repaired:

- timber stiles that are warped, splintered, cracked or broken;
- metal stiles that are twisted, bent, kinked, crushed or with cracked welds or damaged feet;
- rungs, steps, treads or top plates that are missing, worn, damaged or loose;
- tie rods that are missing, broken or loose;
- ropes, braces or brackets that are missing, broken or worn; and
- timber members that, apart from narrow identification bands, are covered with an opaque paint or other treatment that could disguise faults in the timber.

Ladders should not be painted as essential safety information may be obscured.



More information:

Creating Healthier Workplaces: <http://education.qld.gov.au/health/>

Health & Safety Checklist

Safe Use of Ladders

Because ladders are the most common type of access equipment used in industry, thousands are used every working day. As a result:

- Training in the safe use of ladders should be provided.
- Ladders should be inspected before every use and;
- Inspection and training records should be kept.

LADDER USE CHECKLIST

	Yes	No
Are ladders the safest practical means of access?	<input type="checkbox"/>	<input type="checkbox"/>
Is the ladder in use properly suited to the task?	<input type="checkbox"/>	<input type="checkbox"/>
Is the ladder appropriate for industrial use (min 120 kg)?	<input type="checkbox"/>	<input type="checkbox"/>
Do the side rails of the ladder extend at least 1m above the landing?	<input type="checkbox"/>	<input type="checkbox"/>
Are the ladders inspected before being used?	<input type="checkbox"/>	<input type="checkbox"/>
Is the base on firm footing and secured against slippage?	<input type="checkbox"/>	<input type="checkbox"/>
Are ladders tied off at the top, blocked, secured or held by a second worker?	<input type="checkbox"/>	<input type="checkbox"/>
Is the ladder being used only for the purposes for which it was intended?	<input type="checkbox"/>	<input type="checkbox"/>
Are three points of contact maintained at all times when climbing?	<input type="checkbox"/>	<input type="checkbox"/>
Are straight ladders being erected at the proper angle of 4:1 (75°-- 80°)?	<input type="checkbox"/>	<input type="checkbox"/>
Are ladders being used in locations where they will not block passageways?	<input type="checkbox"/>	<input type="checkbox"/>
Are barriers being set up when it is necessary to block a passageway?	<input type="checkbox"/>	<input type="checkbox"/>
Is only one person on the ladder at a time?	<input type="checkbox"/>	<input type="checkbox"/>
Are ladders being stored so as to avoid damage or personal injury?	<input type="checkbox"/>	<input type="checkbox"/>
Are tools carried on a belt or tool pouch and materials hoisted?	<input type="checkbox"/>	<input type="checkbox"/>
Are rungs grasped rather than side rails for more safety if a foot slips?	<input type="checkbox"/>	<input type="checkbox"/>
Is the weight of the ladder being placed squarely on the ladder feet? (not on the rungs)	<input type="checkbox"/>	<input type="checkbox"/>
Are two or more people used to erect long or heavy ladders?	<input type="checkbox"/>	<input type="checkbox"/>