



Naval Support Activity Monterey /
Naval Postgraduate School



Ladder Safety

SAFETY GRAM

29 September 2014



Purpose: The purpose of this Safety Gram is to promote ladder mishap prevention efforts through the identification of key regulatory compliance points and established Standard Operating Procedures. This document serves as an SOP for ladder safety, however, it is not all inclusive and additional OJT should be provided by your supervisor / lab manager prior to use.

Scope & Applicability: Ladder safety methods are applicable to all faculty, staff, and students, temporary/term, contract, and permanent employees as well as visitors who may be engaged in the use of a ladder located within NSAM/NPS labs, machine shops and other facilities. Ladder safety methods are applicable in home settings as well.

Choosing the Right Ladder

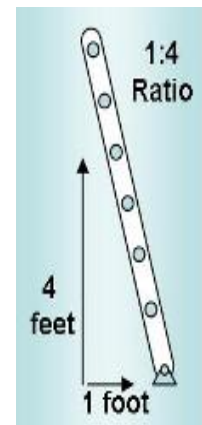
With the right ladder and proper use, working above ground level should be no problem. Make sure you have an appropriate ladder and use correct technique for placement and climbing.

There are many portable ladder types:

1. Industrial: heavy-duty with a load capacity not more than 250 pounds.
2. Commercial: medium-duty with a load capacity not more than 225 pounds. Best suited for painting and similar tasks.
3. Household: light-duty with a load capacity of 200 pounds.
4. Step Ladder: typical for jobs around the house.
5. Extension Ladder: adjustable length adaptable to different situations.

- **Aluminum vs. Wood vs. Fiberglass**

- Aluminum ladders are recommended for multiple reasons as opposed to wood. Aluminum is stronger. As well as lighter in weight, more durable, flame resistant and unaffected by moisture.
- **NOTE:** If performing electrical work, never use an aluminum ladder. Fiberglass is recommended in this instance.



Standard Operating Procedure

- Make sure the ladder is suited for the type of job you plan to do.
- Before using a ladder, 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 (see graphic).



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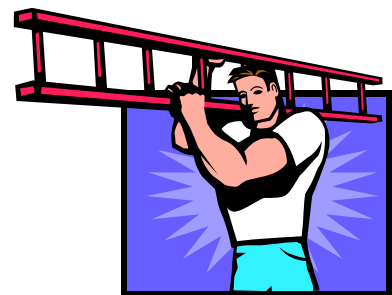
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- When using an A-frame stepladder, make sure the brace is locked in place.
- If climbing onto another surface, make sure the ladder extends at least three feet past the platform you're climbing onto.
- Secure tall ladders by lashing or fastening the 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.
- Do not climb higher than the second rung on stepladders or the third rung on straight or extension ladders (from the TOP of the ladder).
- 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 - kids love them.
- When working with electricity, use a ladder made of wood or fiberglass.
- Insure the bottom of the four/two rails are supplied with insulating non-slip material for the safety of the user.

Ladder Maintenance

Inspect ladders 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.

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

Defective Ladders

Ladders needing repairs are subject to the following rules:

- **Broken ladders should be replaced immediately to prevent injury.**
- If for some reason it is not practical to replace a defective ladder the following action must be taken:
 - Ladders with structural defects—such as broken or missing rungs, cleats or steps, broken split rails, corroded components or other faulty or defective components—must immediately be marked defective or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.