

LADDER SAFETY

Supplement to Standard Training Module

TRAINING REQUIREMENTS OVERVIEW

This standard Vivid training module provides a general overview of ladder safety. Although no particular training regimen is required by the OSHA standard, employees who use ladders **must** know how to inspect, care for, and safely use ladders (as defined in the standard).

In addition to the general overview, employees ***should*** receive facility and work-specific training. This additional training ***should*** cover:

- Nature of fall hazards in the workplace, and where ladders are to be used
- Correct procedures for erecting, maintaining and disassembling fall protection systems to be used
- Location of ladder storage areas, and proper securement procedures for storage.

The General Duty Clause requires an employer to “provide employment and a place of employment which are free from recognized hazards”. Employee training, appropriate to recognized workplace hazards, is anticipated to be a part of a facility’s overall safety and health program.

Frequency: Training ***should*** be provided to affected employees:

- Upon initial assignment of work
- When recognized hazards change, or new hazards are introduced into the workplace
- When new or modified processes, procedures, and/or equipment are introduced into the workplace

GENERAL OVERVIEW OF THE STANDARDS

PORTABLE WOOD LADDERS - 29 CFR 1910.25

PORTABLE METAL LADDERS - 29 CFR 1910.26

FIXED LADDERS - 29 CFR 1910.27

Related standards:

LADDERS (in construction) 29 CFR 1926.1053

FIXED LADDERS (in Longshoring) 20 CFR 1918.24

FIXED LADDERS (in Marine Terminals) 1917.118

PORTABLE LADDERS (in Marine Terminals) 1917.119

PURPOSE: These standards are intended to prescribe rules and establish minimum requirements for the construction, care, and use of the common types of fixed and portable, wood and metal ladders, in order to ensure safety under normal conditions of usage.

OVERALL SCOPE: The various standards listed above apply to the use of a variety of portable and fixed ladders used in General Industry, Construction, and Marine/Longshoring Industries. Those covered under 29 CFR 1910.25, 1910.26, and 1910.27 are outlined in relative detail below. The other standards should be reviewed by those in the applicable industries.

Other types of special ladders, fruit-picker's ladders, combination step and extension ladders, stockroom step ladders, aisle-way step ladders, shelf ladders, and library ladders are *not specifically covered* by this section.

PORTABLE WOOD LADDERS - 29 CFR 1910.25

1. **SCOPE:** This standard applies to the use of portable wooden ladders in General Industries.
2. **MATERIALS:** Requirements are stated for wood materials and condition of wood materials. All wood parts shall be free of:
 - sharp edges and splinters
 - shake, wane, decay
 - compression failure or other irregularities
3. **CONSTRUCTION:** General requirements are stated for certain dimensions and configurations required for various styles of ladders. These include width of ladder, spacing of rungs, maximum lengths, spreaders, etc. Ladder specifications are provided for:
 - Step Ladders

- Type I – Industrial Stepladder
 - Type II – Commercial Stepladder
 - Type III – Household Stepladder
 - Portable rung ladders
 - Special purpose ladders
 - Trolley and side-rolling ladders
4. CARE AND USE: All ladders must be maintained in good condition at all times. “Frequent” inspections must be performed on all structural components, moving parts, feet, and any rope, pulleys or other such components. Safety guidelines are stated for use of portable wood ladders.

PORTABLE METAL LADDERS - 29 CFR 1910.26

1. SCOPE: This standard applies to the use of portable metal ladders used in General Industry.
2. GENERAL SPECIFICATIONS: Specific design and construction requirements are not stated in the standard because of the wide variety of metals and design possibilities. However, certain minimum parameters are outlined for:
 - Step ladders
 - Trestles
 - Extension trestle ladders
 - Platform ladders

Certain guidelines for dimensions and configurations are stated. These include width of ladder, spacing of rungs, maximum lengths for each style of ladder.

3. CARE AND USE: All ladders must be maintained in good condition at all times. “Immediate” inspections must be performed on any ladder that is:
 - Subjected to a fall, including the side rails, rungs, rung-to-side-rail connections, hardware connections and rivets
 - Exposed to grease or oil

Safety guidelines are stated for use of portable metal ladders.

FIXED LADDERS - 29 CFR 1910.27

1. SCOPE: This standard applies to the use of fixed ladders within the pitch range of 60 degrees and 90 degrees with the horizontal.

2. DESIGN REQUIREMENTS: Guidelines are stated covering the acceptable dimensions and load ratings of fixed ladders.
3. SPECIFIC FEATURES: Design dimensions of various components are clarified for fixed ladders, including rungs and cleats, side rails, fastenings, welds, etc. Requirements are also stated for protecting ladders from deteriorating forces, such as electrolytic reaction for fixed metal ladders and rot for fixed wood ladders.
4. CLEARANCE: Additional design specifications are reviewed for clearance on the climbing side and the backside of fixed ladders (with or without cages), grab-bars, and step-across distances.
5. SPECIAL REQUIREMENTS: Design requirements are outlined for:
 - Cages and wells
 - Landing platforms
 - Ladder extensions
 - Grab bars
 - Ladder safety devices
6. PITCH: Guidelines for preferred and substandard pitch ranges are detailed for fixed ladders.
7. MAINTENANCE: No particular maintenance intervals are specified. Rather, “all ladders shall be maintained in a safe condition. All ladders shall be inspected regularly, with the intervals between inspections being determined by use and exposure”.

REFERENCE MATERIALS

Publications

Stairways and Ladders

Publication # 3124

Can be downloaded at: <http://www.osha.gov/Publications/Osha3124.pdf>

Website

OSHA websites:

Portable Wood Ladders 29 CFR 1910.25

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9717&p_text_version=FALSE

Portable Metal Ladders 29 CFR 1910.26

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9718&p_text_version=FALSE

Fixed Ladders 29 CFR 1910.27

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9719&p_text_version=FALSE

Fixed ladder and cage construction dimensions:

http://www.osha.gov/OshStd_gif/10dfd_2.gif

FIGURE D-7. - Cages for Ladders More Than 20 Feet High

http://www.osha.gov/OshStd_gif/10dfd_7.gif

FIGURE D-8. - Clearance Diagram for Fixed Ladder in Well

http://www.osha.gov/OshStd_gif/10dfd_8.gif

FIGURE D-9. - Cages-Special applications.

http://www.osha.gov/OshStd_gif/10dfd_9.gif

FIGURE D-10. - Offset Fixed Ladder Sections

http://www.osha.gov/OshStd_gif/10dfd_10.gif

FIGURE D-11. - Pitch of Fixed Ladders

http://www.osha.gov/OshStd_gif/10dfd_11.gif