



Pannier Corporation

Health and Safety Handbook

Marking System Group



Portable Ladder Safety Plan

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Regulation: Portable Wood and Metal Ladders (29 CFR 1910.25 and 29 CFR 1910.26) *[Replace with state regulations if applicable.]*

Scope: This Plan applies to all **Pannier Corporation** employees and contracted employees in all construction areas.

POLICY STATEMENT

It is the policy of this organization to prevent injuries to all employees and ensure their safety at work. We will evaluate all slip, trip, and fall hazards related to the use of portable ladders and implement procedures and communication programs to protect workers from injury. All portable ladders will be provided and maintained free of slip, trip, and fall hazards that could result in injury to workers and visitors.

PLAN ADMINISTRATION

Function	Name/Department	Phone
Plan Administrator	John Visconti	412-492-1400 ext. 310
Competent Person	Supervisors	

Plan Administrator. The Administrator will:

- Ensure compliance with safety and health regulations and policies for portable ladders.
- Develop, implement, and periodically evaluate the effectiveness of this Plan.
- Enforce all safety policies and procedures in the Plan.
- Ensure that all personnel who use portable ladders are trained in safe work practices.

Competent person. The competent person will conduct periodic inspections, surveys, and analyses of slip, trip, and fall hazards for all portable ladders.

Supervisors. Supervisors will:

- Periodically inspect for slip and fall hazards related to portable ladders, and continually conduct safety checks of work operations.
- Enforce all safety policies and procedures in this Plan.
- Take defective ladders out of service.

Employees. All employees will:

- Follow the procedures of this Plan and the instructions of their supervisor.
- Report any unsafe or hazardous conditions or acts that may cause injury to either them or any other employees.
- Properly care for and use portable ladders according to the procedures in this Plan and manufacturer's instructions
- Avoid activities that could result in personal injury or injury to others.

Plan Review and Update



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This Plan will be reviewed annually by all supervisors to insure the program's effectiveness and changed or updated as needed.

DEFINITIONS

Cleat means a ladder crosspiece or rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

Competent person means a person capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Fixed ladder means a ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

Handrail means a rail used to provide employees with a handhold for support.

Job-made ladder means a ladder that is fabricated by employees, typically at the construction site; in other words, noncommercially manufactured.

Portable ladder means a ladder that can be readily moved or carried.

Rung means a ladder crosspiece of circular or oval cross section on which a person may step while ascending or descending.

Single ladder means a ladder consisting of a pair of side rails connected together by cleats, rungs, or steps.

Stepladder means a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back.

Two-section ladder means a non-self-supporting portable ladder adjustable in length consisting of two sections.

HAZARD ASSESSMENT

The competent person will conduct a job hazard analysis (JHA) or assessment of areas where portable ladders are used for potential slip, fall, electrocution, and other hazards.

The competent person will consider all possible ladder-related hazards, including:

- Slipping of the ladder base
- Tipping sideways
- Excessive loading
- Damage to ladders and components
- Electrical power lines
- Heat sources
- Slippery floors
- Obstructions
- Pedestrian or vehicle traffic

See the attached Job Hazard Analysis Worksheet and the Slips, Trips, and Falls Hazard Assessment Survey forms for more information.



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LADDER SPECIFICATIONS

Wood Ladders

The following design and construction specifications apply to all wooden ladders:

- Single ladders must be no longer than 30 feet (ft).
- Two-section ladders must be no longer than 60 ft.
- The minimum overlap for two-section ladders in use that are up to 36 ft long will be at least 3 ft; for ladders up to 48 ft long the overlap will be at least 4 ft; and for ladders up to 60 ft long the overlap will be at least 5 ft.
- Ladder rungs, cleats, and steps will be parallel, level, and uniformly spaced when the ladder is in position for use.
- Rungs, cleats, and steps (except as otherwise provided in these specifications) must not be spaced less than 10 inches (in.) (25 centimeters (cm)) apart, nor more than 14 in. (36 cm) apart, along the ladder's side rails.
- Rungs, cleats, and steps of step stools will not be less than 8 in. (20 cm) apart, nor more than 12 in. (31 cm) apart, between center lines of the rungs, cleats, and steps.
- When splicing side rails, the resulting side rail will be equivalent in strength to a one-piece side rail made of the same material.
- Two or more separate ladders used to reach an elevated work area will be offset with a platform or landing between the ladders, except when portable ladders are used to gain access to fixed ladders.
- Ladder components will be surfaced to prevent snagging of clothing and injury from punctures or lacerations.
- Use shellac, varnish, or linseed oil to protect wood surfaces.
- Never paint a wood ladder with an opaque coating since such coatings will hide defects.
- Use non-self-supporting ladders at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder.
- Wood ladders will not be coated with any opaque covering except for identification or warning labels, which may be placed only on one face of a side rail.
- Use job-made wood ladders built at the jobsite with spliced side rails at an angle where the horizontal distance is one-eighth of the working length of the ladder.
- Rungs, cleats, and steps at the base section of extension trestle ladders will not be less than 8 in. (20 cm) nor more than 18 in. (46 cm) apart, between center lines of the rungs, cleats, and steps. The rung spacing on the extension section will not be less than 6 in. (15 cm) nor more than 12 in. (31 cm).
- Portable rung ladders with reinforced rails will be used only with the metal reinforcement on the under side.

Metal Ladders

- Single ladders must be no longer than 30 ft.
- Two-section ladders must be no longer than 48 ft.
- More than two-section ladders must be no longer than 60 ft.



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- The minimum overlap for two-section ladders in use that are up to 36 ft long will be at least 3 ft; for ladders up to 48 ft long the overlap will be at least 4 ft; and for ladders up to 60 ft long the overlap will be at least 5 ft.
- Non-slip safety feet will be provided on each metal or rung ladder.
- Portable metal ladders will be legibly marked with signs reading "CAUTION - Do Not Use Around Electrical Equipment" or equivalent wording.
- The rungs of ladders will be uniformly spaced at 12 in. (30.48 cm) center to center.
- Rungs and steps will be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.

Stepladders

Only two types of stepladders will be used:

- Type I industrial stepladder 3 ft to 20 ft long for heavy-duty work such as utilities, contractors, and industrial use.
- Type II commercial stepladder 3 ft to 12 ft long for medium duty such as painters and light industrial use.

The bottoms of the four rails will be supplied with insulating nonslip material for the safety of the user.

A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in the open position will be a component of each stepladder. The spreader will have all sharp points or edges covered or removed to protect the user.

Mason Ladders

- Mason ladders must be no longer than 40 ft.

Trolley and Side-Rolling Ladders

- Trolley and side-rolling ladders must be no longer than 20 ft.

SAFETY PROCEDURES

General Work Practices for All Ladders

All employees will comply with the following ladder safe work practices:

- Place the base of the ladder a distance from the vertical wall equal to one-fourth the working length of the ladder; for example, the base of a ladder with a working length of 16 ft. will be placed 4 ft from the vertical wall.
- Always extend the top of rung ladders at least 3 ft (0.9144 meters) above the elevated surface when using them to gain access to elevated platforms, roofs, and other heights.
- Place the top of a non-self-supporting ladder with two rails supported equally, unless it is equipped with a single support attachment.
- Secure the base of a portable rung or cleat-type ladder to prevent slipping, or otherwise lash or hold it in place.
- Always maintain 3 points of contact with the ladder--either two hands and a foot or both feet and a hand.
- Maintain ladders free of oil, grease, and other slipping hazards.
- Do not load ladders beyond their maximum intended load nor beyond their manufacturer's rated capacity.



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- Only one person at a time will occupy a ladder.
- Do not use a ladder as a guy, brace, skid, gin pole, or for other than its designed purposes.
- Use ladders only on stable and level surfaces unless secured to prevent accidental movement.
- Do not use ladders on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement.
- Do not use slip-resistant feet as a substitute for exercising care when placing, lashing, or holding a ladder on slippery surfaces.
- Secure ladders that are placed in areas such as passageways, doorways, driveways, or where they can be displaced by workplace activities or traffic to prevent accidental movement; or, use a barricade to keep traffic or activity away from the ladder.
- Keep areas clear around the top and bottom of ladders.
- Do not move, shift, or extend ladders while in use.
- Use ladders equipped with nonconductive side rails if the worker or the ladder could contact exposed energized electrical equipment.
- Do not tie or fasten ladders together to create longer sections unless they are specifically designed for such use.
- Face the ladder when moving up or down the ladder.
- Use at least one hand to grasp the ladder when climbing.
- Do not carry objects or loads that could cause loss of balance and falling.
- Do not place a ladder in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- Do not place a ladder on boxes, barrels, or other unstable bases to obtain additional height.
- Do not use a ladder that is broken, has any missing steps, rungs, or cleats, broken side rails, or other faulty equipment.
- Do not use the top step of ordinary stepladders as a step.
- Only adjust extension ladders while standing at a base and not while standing on the ladder or from a position above the ladder.
- Do not use the bracing on the back legs of stepladders for climbing.
- Inspect ladders for damage before each use.

Stepladders

Employees will comply with the following work practices for stepladders at all times:

- Do not use a stepladder that is longer than 20 ft.
- Do not use the top or top step of a stepladder as a step.
- Do not use cross bracing on the rear section of stepladders for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.
- Ensure that stepladders are equipped with functional metal spreader or locking devices to hold the front and back sections in an open position when in use.



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Using Ladders to Transport Objects

It is prohibited to use ladders when carrying objects or loads by hand. Do not carry any objects or loads that could cause loss of balance and falling.

The ladder user must always maintain 3 points of contact with the ladder; use either two hands and a foot, or both feet and a hand.

Tools will be transported up or down the ladder on a belt or with a rope or hoist, not by hand.

STORAGE

Ladders will be stored in the following manner:

- Store all ladders in an area sheltered from exposure to excessive heat, moisture, chemicals, or other elements that would lead to premature deterioration or to damage.
- Store wood ladders affected by exposure to heat and dampness in a well-ventilated area.
- Store straight and extension ladders horizontally on racks or hooks with support points at the top, middle, and bottom of the ladder to prevent sagging and warping.

INSPECTIONS

All ladders will be inspected regularly, with the intervals between inspections being determined by use and exposure. A competent person will inspect ladders for visible defects periodically and after any incident that could affect their safe use.

All ladders will be inspected for:

- Shake
- Wane
- Compression failures
- Decay
- Other irregularities

If a ladder tips over, immediately inspect it before subsequent use for:

- Side rail dents or bends
- Damage to rung-to-side-rail connections
- Damage to hardware connections
- Rivets for shear

MAINTENANCE AND CARE

All ladders will be maintained in good condition at all times. The following maintenance and care procedures will be implemented during each workshift:

- Keep joints between steps and side rails tight.



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- Ensure all hardware and fittings are securely attached.
- Ensure moveable parts operate freely without binding or undue play.
- Replace frayed or badly worn rope.
- Keep safety feet and other auxiliary equipment in good condition to insure proper performance.
- Keep ladder rungs and steps free of grease and oil.

Lubricate metal bearings of locks, wheels, pulleys, and other moving or adjustable parts at regular intervals depending on frequency and severity of use.

Repair

Improvised ladder repairs are prohibited.

Ladders needing repairs are subject to the following rules:

- Portable ladders with structural defects--such as broken or missing rungs, cleats, or steps, broken or split rails, corroded components or other faulty or defective components--will immediately be marked defective or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.
- Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.

ACCIDENT INVESTIGATION

All incidents that result in injury to workers, as well as near misses, will be reported and investigated. Investigations will be conducted by a competent person as soon after an incident as possible to identify the cause and means of prevention to eliminate the risk of reoccurrence.

See the attached *Accident Investigation Report* form for more information.

In the event of an incident that results in serious injury, this Plan will be reevaluated to determine if additional practices, procedures, or training is necessary to prevent future incidents.

SAFETY MEETINGS

Supervisors will provide safety meetings or talks to employees as a group every **year** and to individual employees who fail to follow safe procedures.

TRAINING

A competent person will provide training in ladder hazards and safe practices to all employees who may use portable ladders at time of hire and as needed thereafter. All employees will be trained to recognize hazards related to portable ladders and instructed how to minimize or eliminate these hazards. Training will include, as applicable:

- The nature of slip and fall hazards related to portable ladders
- Proper use, placement, and care in handling of all portable ladders
- Maximum intended load-carrying capacities of ladders used

Retraining



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Each employee will be retrained as necessary to maintain his or her understanding and knowledge on the safe use of portable ladders.

Recordkeeping

Training will be documented with employee sign-in sheets, date of training, and the training session agenda.

RECORDKEEPING

Copies of all hazard assessments, ladder specifications, inspection forms, and safety checklists will be maintained at Pannier Corporation for 3 years.