

Extension Ladder Safety – Know the Laws of Your Province



Falls are the leading cause of workplace injuries and OHS penalties. Over 20% of all workplace fall injuries involve ladders; that rate rises to 81% when the sample is limited to construction workers. OHS regulations require employers to take measures to ensure safe ladder use and prevent ladder falls. The rules vary depending on the type of ladder used. One of the most commonly used and thus important sets of ladder regulations involve extension and other portable ladders. While OHS rules overlap, there are key differences regarding:

- What construction and design standards different kinds of single ladders must meet;
- How those ladders are placed; and
- How those ladders are used.

Here's a summary of the rules that apply in each part of Canada.

OHS Extension Ladder Safety Requirements Across Canada

FEDERAL

CSA Standards: Commercially manufactured portable ladders must meet CSA CAN3-Z11-M81, *Portable Ladders* (COHS Reg, Sec. 3.11(1))

Placement: Portable ladders must be placed on a firm footing and secured so they can't be accidentally dislodged from position (COHS Reg, Sec. 3.11(2)); If a portable ladder can't be securely fastened in place due to the location or work being done, it must be sloped so that the base is no less than one-quarter and no more than one-third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base (COHS Reg, Sec. 3.11(3)); and, Portable ladders providing access from one level to another must extend at least 3 rungs above the higher level (COHS Reg, Sec. 3.11(4))

Safe Use:

I. Employees not allowed to work from any of the 3 top rungs of a single or extension portable ladder (*COHS Reg*, Sec. 3.11(6));

II. Use of metal or wire-bound portable ladders not allowed if there's risk of their coming into contact with a live electrical circuit or equipment (*COHS Reg*, Sec. 3.11(5))

ALBERTA

General Construction Requirements: Employer must ensure that a constructed portable ladder: (a) is constructed of lumber that's free of loose knots or knot holes; (b) with a length of 5 metres or less has side rails constructed of lumber measuring at least 38 mm x 89 mm; (c) more than 5 metres long has side rails constructed of lumber measuring at least 38 mm x 140 mm; (d) has side rails that aren't notched, dapped, tapered or spliced; (e) has side rails at least 500 mm apart at the bottom; and (f) has rungs that are (i) constructed of lumber measuring at least 21 mm by 89 mm (ii) held by filler blocks or secured by a single continuous wire, and (iii) uniformly spaced at a centre to centre distance of 250 mm to 300 mm (*OHS Code*, Sec. 134(1))

Type-Specific Construction Requirements: Employer must ensure that a two-way constructed portable ladder that is wide enough to permit traffic in both directions at the same time: (a) has a centre structural rail along the length of the ladder; (b) is at least one metre wide; and (c) is constructed of materials substantial enough in size to accommodate the maximum intended load (*OHS Code*, Sec. 134(2))

CSA Standards: Portable ladder manufactured on or after July 1, 2009 must meet: (a) CSA CAN3-Z11-M81 (R2005), *Portable Ladders*; (b) ANSI A14.1-2007, *American National Standard for Ladders – Wood – Safety Requirements*; (c) ANSI A14.2-2007, *American National Standard for Ladders – Portable Metal – Safety Requirements*; or (d) ANSI A14.5-2007, *American National Standard for Ladders – Portable Reinforced Plastic – Safety Requirements* (*OHS Code*, Sec. 135)

Placement: Worker must ensure that: (a) a portable ladder is secured against movement and placed on a stable base; and (b) the base of an inclined portable ladder is no further from the base of the wall or structure than one-quarter the distance between the ladder base and the place where the ladder contacts the wall (*OHS Code*, Sec. 136(a) and (b)); and, Worker must also ensure that side rails of a portable ladder extend at least 1 metre above a platform, landing or parapet if the ladder is used as a means of access to the platform, landing or parapet (*OHS Code*, Sec. 136(c))

Safe Use: Worker may not perform work from either of the top 2 rungs, steps or cleats of a portable ladder unless the manufacturer's specifications allow it (*OHS Code*, Sec. 133)

BRITISH COLUMBIA

General Construction Requirements: Manufactured portable ladder must be marked

for the grade of material used to construct the ladder and the use for which the ladder is constructed (*OHS Reg*, Sec. 13.4)

CSA Standards: Not specified

Placement: 1. A portable ladder must be placed on a firm and level surface, and be of sufficient length to enable the safe performance of the work activity while being used; and 2. A portable non-self-supporting ladder must: (a) be positioned so that the ladder is leaning against the vertical plane of support at an approximate angle of 75° when measured from the horizontal plane of support; (b) if the ladder provides access to or egress from an upper landing, it must project approximately 1 m (3 ft) above the upper landing, and be sufficiently secured in place to ensure its stability during access to or egress from the upper landing; and (c) if the ladder isn't already secured in accordance with paragraph (b), it must be sufficiently secured in place to ensure its stability during use if conditions exist that are likely to cause the ladder to be unstable (*OHS Reg*, Sec. 13.5)

Safe Use: I. Worker may not carry heavy or bulky objects or any other objects up or down a ladder if it would make ascent or descent unsafe (*OHS Reg*, Sec. 13.6(2)); II. Work platform must be provided if work can't be done from a ladder without hazard to a worker (*OHS Reg*, Sec. 13.6(1))

MANITOBA

Extension Ladder Construction Requirements: 1. Employer must ensure that an extension ladder used by an employee: (a) is equipped with locks that securely hold the sections of the ladder in the extended position; and (b) doesn't exceed 14.6 m in length, if it consists of 2 sections, or 20 m in length, if it consists of more than 2 sections; 2. Employer must ensure that, if a section of an extension ladder is extended, the extended section overlaps another section for at least: (a) one metre, for a ladder less than 11 m in length; (b) 1.25 m, for a ladder between 11 m and 15 m in length; or (c) 1.5 m, for a ladder over 15 m in length; and 3. Employer must ensure that no single portable ladder and no section of an extension ladder exceeds 9 m in length (*WSH Reg*, Secs. 13.14 and 13.15)

Type-Specific Construction Requirements (Wood): Employer must ensure that a portable wood ladder fabricated on the worksite for use by a worker: (a) is constructed entirely from straight-grained, construction grade or better lumber that's free of: (i) loose knots, or knots greater than one-third the width or thickness of the material, and (ii) sharp edges, splinters or shakes; (b) has side rails that are: (i) at least 400 mm but no more than 500 mm apart, and (ii) not notched, tapered, lapped or spliced; (c) has evenly spaced rungs that are: (i) nailed directly to the edge of the side rails, (ii) not more than 300 mm on centre, (iii) at least nominal 25 mm × 100 mm, and (iv) supported by filler blocks, of the same thickness as the rung, fastened between the rungs or secured by a single continuous wire; and (d) if its length is: (i) 5 m or less, has side rails measuring at least nominal 50 mm × 100 mm, or (ii) more than 5 m, has side rails measuring at least nominal 50 mm × 150 mm (*WSH Reg*, Sec. 13.12)

Type-Specific Construction Requirements (Double-Width Wood): Employer must ensure that a portable wood ladder fabricated on the worksite for use by a

worker which is of double width: (a) is constructed entirely from straight-grained, construction grade or better lumber that's free of: (i) loose knots, or knots greater than one-third the width or thickness of the material, and (ii) sharp edges, splinters or shakes; (b) has side rails that aren't notched, tapered, lapped or spliced; (c) if its length is: (i) 5 m or less, has side rails measuring at least nominal 50 mm × 100 mm, or (ii) more than 5 m, has side rails measuring at least nominal 50 mm × 150 mm; (d) is composed of 3 rails that are evenly spaced; (e) is at least 1.5 m wide; and (f) has evenly spaced rungs that: (i) are not more than 300 mm on centre, (ii) are at least nominal 50 mm × 100 mm, (iii) extend the full width of the ladder, and (iv) are supported by filler blocks, of the same thickness as the rung, fastened between the rungs or secured by a single continuous wire (*WSH Reg*, Sec. 13.13)

CSA Standards: Commercially manufactured portable ladder used at a workplace: (a) must meet: (i) CSA Z11-18, *Portable Ladders*, (ii) ANSI-ASC A14.1-2017, *American National Standard for Ladders – Wood – Safety Requirements*, (iii) ANSI-ASC A14.2-2017, *American National Standard for Ladders – Portable Metal – Safety Requirements*, or (iv) ANSI-ASC A14.5-2017, *American National Standard for Ladders – Portable Reinforced Plastic – Safety Requirements*; and (b) be used and maintained in accordance with the manufacturer's specifications and safe operating instructions (*WSH Reg*, Sec. 13.11)

Placement: Employer must ensure: 1. That a portable ladder is secured against movement at all times during use and is placed on a stable, level base; and 2. That: (a) where a portable ladder is used as a means of access to a platform, roof or other landing, it extends at least one metre above the platform, roof or other landing; and (b) for a portable ladder other than a stepladder, it's placed against a structure so that the slope of the ladder is no more than 1:4 (*WSH Reg*, Sec. 13.16)

Safe Use: I. Employer must ensure that a worker using a commercially manufactured portable ladder: (a) Inspects the ladder for defects prior to each use (and ensure the ladder is removed from service if it's found to be broken or defective) (*WSH Reg*, Sec. 13.8); (b) Does so in accordance with the manufacturer's specifications and safe operating instructions; (c) Doesn't extend any part of his/her body, except the arms, beyond the side rails of the ladder; (d) Maintains a three-point contact on the ladder at all times (*WSH Reg*, Sec. 13.18); and (e) Doesn't perform work from either of the top 2 rungs, steps or cleats unless the manufacturer's specifications for the ladder permit it (*WSH Reg*, Sec. 13.19); II. Employer must ensure that no worker uses a metal ladder or metal reinforced rails on a ladder near any exposed energized electrical circuits or equipment (*WSH Reg*, Sec 13.9)

NEW BRUNSWICK

Extension Ladder Construction: Employer must ensure that a portable extension ladder: (a) has no more than 3 sections, (b) has locks that securely hold the sections of the ladder in an extended position, and (c) when extended, maintains a minimum overlap as follows: (i) where the ladder is 11 m or less, the overlap is 1 m; (ii) where the ladder exceeds 11 m and is 15 m or less, the overlap is 1.25 m; and (iii) where the ladder exceeds 15 m and is 22 m or less, the overlap is 1.5 m (*OHS General Reg*, Sec. 124)

General Construction Requirements: Employer must ensure that a portable ladder used at a place of employment is: (a) of adequate strength and length; (b) clean and free of grease; and (c) maintained in a safe condition; employer must also ensure that ladders are inspected and removed from service if they're found to be defective or broken (*OHS General Reg, Sec. 122*)

Type-Specific Construction Requirements (Wood): Employer must ensure that a portable wood ladder: (a) is made of No. 1 grade or better spruce or fir; (b) isn't painted other than by being preserved with a transparent protective coating; (c) if a single ladder, doesn't exceed 6 m in length; (d) has rungs that are: (i) free of knots, (ii) designed to carry a load of 200 kg placed at the centre, (iii) uniformly spaced with a maximum rise of 300 mm, (iv) secured to each side of the side rail of the ladder by at least 3 screws or barbed nails of adequate length or by attachments giving equivalent or better strength, and (v) notched into the side rails of the ladder at least 13 mm on the lower side or with fillers installed between the rungs; (e) has side rails: (i) dressed on all sides and without sharp edges, and (ii) with a uniform clear width between them of no less than 300 mm for ladders 3 m in length or less, and increasing 1 mm in width for each 100 mm in excess of 3 m (*OHS General Reg, Sec. 123*)

CSA Standards: Portable ladder must meet and be used in accordance with CSA CAN 3-Z11-M81, *Portable Ladders* (*OHS General Reg, Sec. 124*)

Placement: An employee who uses a portable ladder must ensure that: (a) the ladder is secured against movement; and (b) the side rails of the ladder extend at least 1 m above any platform or landing to which the ladder is a means of access (*OHS General Reg, Sec. 125(2)*)

Safe Use: I. An employee who uses a portable ladder must: (a) inspect the ladder before use; (b) report any unsafe condition of the ladder to the employer; (c) face the ladder and use both hands when climbing or descending; and (d) when standing on a ladder, stand in the centre between the side rails (*OHS General Reg, Sec. 125(1)*); II. An employee who uses a portable ladder must NOT: (a) splice ladders together unless the spliced section is braced so that the spliced side rails are as strong as the original side rails; (b) place a ladder in front of or against a door unless the door is blocked in the open position, locked or guarded; (c) use a ladder as scaffold flooring or as support for scaffold flooring; (d) or work from the top 3 rungs (*OHS General Reg, Sec. 125(3)*)

NEWFOUNDLAND

General Construction Requirements: Manufactured portable ladders must be marked for grade and use, and used in accordance with manufacturer's instructions (*OHS Regs, Sec. 148(2)*)

Type-Specific Construction Requirements (Wood): Where a portable wooden ladder is constructed at the job site: (a) the side rails: (i) must be of 38 mm x 89 mm nominal dimensions for lengths up to 5 metres, and 38 mm x 140 mm nominal dimensions for lengths from 5 metres to 7.3 metres, and (ii) must not be notched, dapped, tapered or spliced, and the distance between the inner faces of the side rails must be no less than 38 cm or more than 50 cm; (b) cleats must be: (i) 19 mm x 64 mm for ladder lengths up to 5 metres, (ii) 19 mm x 89 mm for ladder lengths from 5 metres to 7.3 metres, (iii) spaced at 30 cm centres,

and (iv) nailed directly onto the smaller surfaces of the side rails, using three 57-mm wire nails on each end of the 89 mm cleats, and two similar nails on each end of the 64 mm cleats; (c) the spaces on the side rails between the cleats must be filled with close fitting and well secured filler pieces that are the same thickness as the cleats; and (d) a double cleat ladder must have 3 rails evenly spaced, and be 107 cm to 127 cm wide and have continuous cleats which extend the full width of the ladder (*OHS Regs*, Sec. 149); A protective coating applied to a wooden ladder, other than a small amount for identification purposes, must be transparent to allow defects to be discovered by inspection (*OHS Regs*, Sec. 150)

CSA Standards: Portable ladder design, construction and use must meet: (a) CSA CAN3-Z11 *Portable Ladders*; (b) ANSI A14.1-1990 *Safety Requirements for Portable Wood Ladders*; (c) ANSI A14.2-1990 *Safety Requirements for Portable Metal Ladders*; or (d) other standard acceptable to the minister (*OHS Regs*, Sec. 148(1))

Placement: When a portable single or extension ladder is used: (a) it must be placed so that the horizontal distance from the base to the vertical plane of support is approximately one-quarter of the ladder length between supports; and (b) the lower ends of the ladder side rails must rest on a firm and level base and the upper support of the side rails must be rested on a bearing surface strong enough to safely withstand the applied load (*OHS Regs*, Sec. 152); A ladder must be long enough to project approximately one metre above the level of the upper landing to which it provides access, except where there's limited clearance and the ladder is adequately secured (*OHS Regs*, Sec. 153)

Safe Use: (a) Portable ladders must be inspected before use, and ladders with loose, broken or missing rungs, split side rails or other hazardous defects must be removed from service (*OHS Regs*, Sec. 151); (b) A worker may not work from the top 2 rungs unless the manufacturer permits it; (c) A ladder may not be used as a scaffold component or as a horizontal walkway, ramp or work platform support except where the ladder is part of a premanufactured or engineered system; and (d) A worker must maintain 3 points of contact when using a ladder (*OHS Regs*, Sec. 154)

NOVA SCOTIA

General Construction Requirements: Portable ladder must be: (a) able to withstand 4 times the maximum load likely to be imposed; (b) clean and free of grease, oil or other substances that may cause slipping; and (c) maintained in a safe condition (*Occ Safety Gen Regs*, Sec. 148); Employer must ensure that a commercially manufactured portable ladder: (a) if it's an extension ladder, maintains an adequate overlap between the sections of the ladder; (b) has locks engaged before the extension ladder is climbed; and (c) if there's a risk of contact with live electrical conductors, is non-conductive (*Occ Safety Gen Regs*, Sec. 150(3))

Type-Specific Construction Requirements (Wood): Employer must ensure that a wooden portable ladder that isn't commercially manufactured: (a) Is made of No. 1 or No. 2 spruce, pine, or fir as graded according to the latest version of CSA 0141, *Softwood Lumber*, or other lumber providing equivalent level of safety; (b) Isn't painted other than by being preserved with a transparent protective

coating; (c) If a single ladder, doesn't exceed 9 m in length; (d) Has rungs that are: (i) free of knots, (ii) designed to carry a load of 200 kg placed at the centre, (iii) uniformly spaced with a maximum rise of 300 mm, (iv) secured to each side of the side rail of the ladder by at least 3 screws or spiral nails of adequate length or by attachments giving equivalent or better strength, and (v) cleated to the side rails; and (e) Has side rails that: (i) are dressed on all sides and without sharp edges, (ii) have a uniform clear width between them of at least 300 mm for ladders 3 m in length or less, and increasing 1 mm in width for each 100 mm in excess of 3 m, (iii) where the ladder is less than 5.7 m in length, have dimensions of at least 50 mm thick by at least 100 mm wide, and (iv) where the ladder is 5.7 m or greater in length, have dimensions of at least 50 mm thick by at least 150 mm wide (*Occ Safety Gen Regs*, Sec. 149)

CSA Standards: Commercially manufactured ladder must be designed, manufactured and maintained in accordance with latest version of CSA Z11, *Portable Ladders*; But Grade 3 portable ladders described in CSA Z11 may not be used at a workplace (*Occ Safety Gen Regs*, Sec. 150)

Placement: When a portable single or extension ladder is used, employer must ensure it's placed on a firm footing and adequately secured against movement as soon as reasonably practicable (*Occ Safety Gen Regs*, Sec. 151(1))

Safe Use: Employer must ensure that: I. A person using a portable ladder: (a) Faces the ladder when climbing or descending; (b) When more than 1 m above a safe surface, maintains adequate contact with the ladder, such as 3-point contact; (c) If the person is standing on a ladder, stands in the centre between the side rails; (d) Doesn't work from the top 3 rungs (*Occ Safety Gen Regs*, Sec. 148(2)); II. A portable ladder doesn't sway or sag in an unsafe way and is not: (a) Spliced together with another ladder unless the spliced section is braced so that the spliced side rails are as strong as the original side rails; (b) Placed in front of or against a door that can be opened towards the ladder unless the door is blocked in the open position, locked or guarded; (c) Used as a scaffold, ramp, or as a support for such flooring; (d) Placed on a box, barrel, scaffold, or other unstable base; (e) Lashed to another ladder to increase its length; or (f) Located in an elevator shaft or hoistway when such space is being used for hoisting (*Occ Safety Gen Regs*, Sec. 151(2)); and III. A portable ladder is inspected before each use and once a year by a competent person to ensure all components are in adequate condition and the ladder is safe to use and that the ladder is removed from service when it has loose, broken or missing rungs, split side rails or other defects that may be hazardous to the safety of a person at the workplace (*Occ Safety Gen Regs*, Sec. 148(1))

ONTARIO

ONTARIO (GENERAL INDUSTRY)

General Construction Requirements: A portable ladder must be free from broken or loose members or other faults, and have non-slip feet (*OHS Ind Est Regs*, Sec. 73)

Type-Specific Construction Requirements: None

CSA Standards: Not specified

Placement: I. Portable ladder must be placed on a firm footing; II. If portable ladder is longer than 6 metres and isn't securely fastened or is likely to be endangered by traffic, it must: (a) be held in place by one or more workers while being used; and (b) when not securely fastened, be inclined so that the horizontal distance from the top support to the foot of the ladder is no less than 1/4 and not more than 1/3 of the length of the ladder (*OHS Ind Est Regs*, Sec. 73)

Safe Use: Not specified

ONTARIO (CONSTRUCTION)

General Construction Requirements: A portable ladder used for construction may not have defective or loose rungs and must be designed, constructed and maintained so as not to endanger a worker and be capable of withstanding all loads to which it may be subjected (*OHS Const Regs*, Sec. 79)

Type-Specific Construction Requirements: I. It's OK to use a portable single ladder that's custom-built for use at a construction project if the ladder has: (a) Rungs spaced at 300 mm on centres; (b) Side rails at least 300 mm apart; and (c) A maximum length, measured along its side rail, of no more than 9 metres (*OHS Const Regs*, Sec. 80(2)); II. If the custom-built portable ladder is made of wood: (a) The wood must be straight-grained and free of loose knots, sharp edges, splinters and shakes; and (b) It may not be painted or coated with an opaque material that obscures the wood grain or interferes with inspections of the ladder (*OHS Const Regs*, Sec. 80(3)); III. If the custom-built portable ladder has cleat type rungs, the ladder must also: (a) Have side rails that are no less than 400 mm but no more than 610 mm apart; (b) Have side rails measuring no less than: (i) 38 mm x 89 mm if the ladder is 5.8 metres long or less, or (ii) 38 mm x 140 mm if the ladder is more than 5.8 metres long; (c) Have rungs measuring no less than: (i) 19 mm x 64 mm if the side rails are 400 mm apart, or (ii) 19 mm x 89 mm if the side rails are more than 400 mm; and (d) Have rungs braced by filler blocks at least 19 mm thick and located between the rungs (*OHS Const Regs*, Sec. 80(4)); IV. If the custom-built portable ladder is a double-width wooden ladder, it must also: (a) Have 3 evenly-spaced rails measuring at least 38 mm x 140 mm; (b) Have rungs that: (i) measure at least 38 mm x 89 mm, (ii) extend the full width of the ladder, and (iii) are braced by filler blocks at least 19 mm thick; and (c) be at least 1.5 metres wide but no more than 2 metres wide (*OHS Const Regs*, Sec. 80(5))

CSA Standards: Portable ladder must meet design, performance, test, and marking requirements of a Grade 1, Grade 1A, or Grade 1AA in CSA-Z11-12, *Portable Ladders* (*OHS Const Regs*, Sec. 80)

Placement: Portable ladder must be placed on a firm and level footing or support surface, and may not be used in an elevator shaft or a similar hoisting area when the shaft or area is being used for hoisting; A non-self-supporting portable ladder must be situated so that its base is no less than one-quarter, and no more than one-third, of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder, if the ladder isn't securely fastened to prevent its movement (*OHS Const Regs*, Sec. 81)

Safe Use: 1. Manufactured portable ladders must be used in accordance with

manufacturer's instructions and the ladder or ladder section may not be tied or fastened to another ladder or ladder section to increase its length unless the manufacturer's instructions allow for this (*OHS Const Regs*, Sec. 81); 2. A portable ladder used as a means of access and egress between levels of a building or structure, the ground or grade level to a building or structure, or different work surface levels must: (a) Extend at the upper level at least 900 mm above the landing surface; (b) Have a clear space of at least 150 mm behind every rung; (c) Be located so that an adequate landing surface that's clear of obstructions is available at the top and bottom of the ladder for access and egress; and (d) Be secured at the top and bottom to prevent movement of the ladder (*OHS Const Regs*, Sec. 81); 3. When a step-ladder is being used, its legs must be fully spread open and its spreaders must be locked (*OHS Const Regs*, Sec. 83); and 4. No worker may stand or step on (a) the top cap, top step or pail shelf of a step-ladder; (b) the top cap or top step of a combination ladder when it's used as a step-ladder; (c) the top step of the extension section of an extension trestle ladder; or (d) the top step of a trestle ladder (*OHS Const Regs*, Sec. 83)

PRINCE EDWARD ISLAND

Extension Ladder Construction: 1. Employer must ensure that: (a) extension ladders, except when approved by the Division, have no more than 3 sections and don't exceed 18 288 mm (60 ft.) in length when fully extended; (b) extension ladders have locks which securely hold the sections of the ladder in an extended position; (c) the minimum lap of sections of extension ladders when extended for use are Up to 1 158 mm (38 ft.) extended 91 mm (3 ft.) overlap

Up to 1 341 mm (44 ft.) extended 121 mm (4 ft.) overlap

Up to 1 524 mm (50 ft.) extended 152 mm (5 ft.) overlap

Over 1 524 mm (50 ft.) extended 182 mm (6 ft.) overlap

2. Ladder jacks may not be used on extension ladders; and 3. Extension ladders may not be used as part of a scaffold (*OHS Gen Regs*, Sec. 23.8)

General Construction Requirements: I. Portable ladder side rails must have secure footing, a rigid top rest and ample strength to support the applied load; II. Side rails must have a uniform clear width between them of no less than 305 mm (12 in.) for ladders 3,048 mm (10 ft.) in length and under, and increasing 6 mm (in.) in width for each additional 300 mm (1 ft.) in length (*OHS Gen Regs*, Sec. 23.2)

Type-Specific Construction Requirements (Wood): The employer must ensure that a wooden ladder: (a) Is made of good quality, straight grained lumber; (b) Isn't painted other than by being preserved with transparent protective coating; (c) If made on a construction site, has side rails 50 mm x 100 mm (2 in. x 4 in.) lumber; (d) Has rungs: (i) free of knots, (ii) designed to carry safely a load 200 kg (450 lbs.) on the center of the rung, (iii) uniformly spaced not exceeding a spacing of 300 mm (12 in.), (iv) if flat, that are at least 25 mm (1 in.) by 64 mm (2 1/2 in.) and secured by at least 3 screws or wire nails to each side, (v) if flat, are notched into the side rails at least 13 mm (1/2 in.) on the lower side, or with fillers installed between the rungs; (e) Has round rungs

of at least 31 mm (1 1/4 in.) diameter with tenons 6 mm (1/4 in.) less diameter fitting through side rails, secured with a screw or wire nail through tenon at mid-length; (f) Has side rails that meet the thickness and depth specifications (*OHS Gen Regs*, Sec. 23.4)

Length (in feet)	Thickness (in mm)	Depth (in mm)
20 or less	29	64
Over 20 and up to 22	31	70
Over 22 and up to 30	31	76

CSA Standards: Not specified

Placement: Portable ladder user must ensure that: (a) The base of a ladder that's inclined is no more than one-fourth the length of the ladder out from the vertical line of contact at the top unless the top is securely fastened; (b) Where possible, the top of the ladder is securely fastened to prevent movement; and (c) The side rails extend at least 914 mm (3 ft.) above a landing (*OHS Gen Regs*, Sec. 23.2)

Safe Use: Ladder user must: (a) Inspect a ladder before use; (b) Report any unsafe condition of the ladder to the employer; (c) Not work from the top three rungs of a single or extension ladder; (d) Not lash or splice ladders together; (e) Not place a ladder in front of or against a door unless the door is blocked in the open position, locked or guarded; (f) Use both hands and face the ladder when ascending or descending; (g) When standing on a ladder, keep the centre of his body between the side rails (*OHS Gen Regs*, Sec. 23.3)

QUÉBEC

Extension Ladder Construction: 1. Length of a portable extension ladder with 2 or more extensions, measured along the siderails, may not exceed 15 m.; and 2. Where the ladder is deployed, the raised section must be on top of the lower section at all times during use (*OHS Reg*, Sec. 27)

General Construction Requirements: The type of portable ladder used must be chosen on the basis of the work to be performed or the work environment (*OHS Reg*, Sec. 25.1)

Type-Specific Construction Requirements: None

CSA Standards: Portable ladder used on a work site must be manufactured and certified in accordance with whatever version of CSA Z11, *Portable Ladders*, applied when it was manufactured (except for three-rail orchard ladders) (*OHS Reg*, Sec. 25)

Placement: Portable ladder must: (a) Rest on a firm base with the upper part propped on the 2 siderails; (b) Be firmly held in place by one or more persons, if the ladder isn't firmly attached and if its length is 9 metres or more; (c) Be protected against any sliding and against any shock that could compromise equilibrium; (d) If not firmly fixed, be so inclined that the horizontal distance between the base of the ladder and the vertical plane of its top support is approximately between the quarter and the third of the length of the ladder between its supports; (e) Where the ladder is used as a means of access:

(i) be firmly fixed in place; (ii) extend 900 mm beyond the top storey; (iii) have a space behind the rungs of at least 150 mm; (f) Be set in such a manner that there's sufficient space at the base allowing safe access; (g) Never be linked to another ladder, end to end, by lapped joints; (h) Not be put on scaffolding, an elevated platform, an aerial basket or platform, on crates, barrels or in front of a door opening onto the ladder; and (i) If applicable, have the sections properly assembled and the locks properly engaged (*OHS Reg*, Sec. 26)

Safe Use: I. Portable ladder must be: (a) Inspected before use to ensure it's in good condition; (b) Be placed near the work to be performed to avoid any unsteadiness; and (c) Moved when it's closed or folded while avoiding any obstacle such as electrical wires (*OHS Reg*, Sec. 25.1); II. The worker using a portable ladder must: (a) Face the ladder at all times; (b) Remain in the centre of the steps or rungs and comply at all times with the maximum height indicated by the manufacturer; and (c) Maintain 3 points of contact while climbing or descending the portable ladder or stepladder, unless fall protection is used (*OHS Reg*, Sec. 30); III. It's illegal to: (a) Use a portable ladder that's made of metal or is metal-reinforced near an exposed electrical circuit; (b) Use a portable ladder as a horizontal support; (c) Stand on the top 2 rungs; and (d) Use the intermediate or upper section of a multiple-section ladder or of an extension ladder as the lower section, unless such use is authorized by the manufacturer (*OHS Reg*, Sec. 29)

SASKATCHEWAN

Extension Ladder Construction: Employer or contractor must ensure that: (a) an extension ladder is equipped with locks that securely hold the sections of the ladder in the extended position; (b) if a section of an extension ladder is extended, the section that's extended overlaps another section for at least 1 metre; (c) an extension ladder consisting of 2 sections does not exceed 14.6 metres in length; (d) an extension ladder consisting of more than 2 sections does not exceed 20 metres in length; and (e) no single portable ladder and no section of an extension ladder exceeds 9 metres in length (*OHS Regs*, Sec. 16-6)

General Ladder Construction Requirements: Employer, contractor or supplier must ensure that: 1. Every ladder is designed, constructed, used and maintained to perform its function safely; and 2. No wooden ladder or stepladder is painted with any substance other than a transparent coating; 3. No ladder is made by fastening cleats across a single rail or post (*OHS Regs*, Sec. 16-5); 4. Employer or contractor must ensure that: (a) a portable ladder is equipped with non-slip feet; (b) a portable ladder is secured against accidental movement during use; (c) a metal or wire-bound portable ladder is not used where the ladder or a worker handling or using the ladder may come into contact with an exposed energized electrical conductor; and (d) a portable ladder extends at least 1 metre above any platform, roof or other landing to which the ladder is used as a means of access; and 5. Employer or contractor must ensure that a stepladder: (a) is no more than 6 metres high when set for use; (b) has legs that are securely held in position by means of metal braces or an equivalent rigid support; and (c) when in use, has a front section slope at an angle of 1 horizontal to 6 vertical (*OHS Regs*, Sec. 16-6)

CSA Standards: Not specified

Safe Use: 1. If a worker uses a portable ladder other than a stepladder, employer or contractor must ensure that: (a) the ladder is placed against the structure so that the slope of the ladder is 1 horizontal to 4 vertical; (b) the worker doesn't extend any part of their body except for their arms beyond the side rails of the ladder; and (c) the worker maintains a three-point stance on the ladder at all times; and 2. Employer or contractor must ensure that a worker doesn't work from either of the top 2 rungs or steps of a portable ladder, unless the ladder is a stepladder that has a platform equipped with a suitable handrail (*OHS Regs*, Sec. 16-7)

Construction Ladder Requirements: 1. "Construction ladder" defined as a ladder constructed at a worksite; and 2. Employer or contractor must ensure that: (a) the side rails of a construction ladder that's 5 metres or less in length are constructed of number 1 structural grade spruce lumber that measures not less than 38 by 89 millimetres or of material of equivalent strength and rigidity; (b) the side rails of a construction ladder that is over 5 metres in length are constructed of number 1 structural grade spruce lumber that measures not less than 38 by 140 millimetres or of material of equivalent strength and rigidity; (c) no construction ladder is more than 10 metres long; (d) the rungs of a construction ladder are: (i) constructed of number 1 structural grade spruce lumber that measures not less than 21 by 89 millimetres or of material of equivalent strength and rigidity; (ii) supported by filler blocks or secured by a single continuous wire; and (iii) uniformly spaced with not more than 300 millimetres between their centres; (e) the width between the side rails of a construction ladder is at least 500 millimetres; (f) every two-way construction ladder that permits traffic in both directions at the same time is not less than 1.2 metres wide and is constructed with a centre structural rail throughout the ladder's entire length; and (g) no plywood is used for the side rails or rungs of a construction ladder (*OHS Regs*, Sec. 16-9)

NORTHWEST TERRITORIES & NUNAVUT

Extension Ladder Construction: Employer must ensure that: (a) an extension ladder is equipped with locks that securely hold the sections of the ladder in the extended position; (b) if a section of an extension ladder is extended, the section that's extended overlaps another section for at least 1 metre; (c) an extension ladder consisting of 2 sections does not exceed 14.6 metres in length; (d) an extension ladder consisting of more than 2 sections does not exceed 20 metres in length; and (e) no single portable ladder and no section of an extension ladder exceeds 9 metres in length (*OHS Regs*, Sec. 259)

General Ladder Construction Requirements: Employer or supplier must ensure that: 1. Every ladder is designed, constructed, used and maintained to perform its function safely; and 2. No wooden ladder or stepladder is painted with any substance other than a transparent coating; 3. No ladder is made by fastening cleats across a single rail or post (*OHS Regs*, Sec. 258); 4. Employer must ensure that: (a) a portable ladder is equipped with non-slip feet; (b) a portable ladder is secured against accidental movement during use; (c) a metal or wire-bound portable ladder is not used where the ladder or a worker handling or using the ladder may come into contact with an exposed energized electrical conductor; and (d) a portable ladder extends at least 1 metre above any

platform, roof or other landing to which the ladder is used as a means of access; and 5. Employer must ensure that a stepladder: (a) is no more than 6 metres high when set for use; (b) has legs that are securely held in position by means of metal braces or an equivalent rigid support; and (c) when in use, has a front section slope at an angle of 1 horizontal to 6 vertical (*OHS Regs*, Sec. 259)

CSA Standards: Not specified

Safe Use: 1. If a worker uses a portable ladder other than a stepladder, employer must ensure that: (a) the ladder is placed against the structure so that the slope of the ladder is 1 horizontal to 4 vertical; (b) the worker doesn't extend any part of their body except for their arms beyond the side rails of the ladder; (c) the worker maintains a three-point stance on the ladder at all times; and (d) the ladder is anchored to prevent movement at its base and upper points of support; and 2. Employer must ensure that a worker doesn't work from either of the top 2 rungs or steps of a portable ladder, unless the ladder is a stepladder that has a platform equipped with a suitable handrail (*OHS Regs*, Sec. 260)

YUKON

Portable Extension Ladder Construction & Design: A portable extension ladder must: (a) have no more than 3 sections, (b) have locks that securely hold the sections of the ladder in an extended position, and (c) when extended, shall maintain a minimum overlap as follows: i. where the ladder is 11 m (36 ft.) or less, the overlap is at least 1 m (3 ft.), ii. where the ladder exceeds 11 m (36 ft.) and is less than 15 m (49 ft.), the overlap is at least 1.25 m (4 ft.), and iii. where the ladder exceeds 15 m (49 ft.) and is less than 20 m (66 ft.), the overlap is at least 1.5 m (5 ft.) (*WSC Regs*, Sec. 10.28)

General Requirements: 1. Any ladder must be: (a) Of adequate strength and length for the work being done; (b) Clean and free from grease, oil or other slippery substance; (c) Maintained in safe condition; and (d) Removed from service or repaired immediately when it has loose, broken or missing rungs, split side rails or other defects that may be hazardous to a worker (*WSC Regs*, Sec. 10.21); 2. Manufactured portable ladders must be: (a) Marked for grade and use; and (b) Used in accordance with the manufacturer's instructions (*WSC Regs*, Sec. 10.25(2)); and 3. Maximum length of a portable ladder, as measured along the siderail, is: (a) 5 m (16 ft.) for a trestle ladder or for each of the base or extension sections of an extension trestle ladder; (b) 9 m (30 ft.) for a stepladder; (c) 9 m (30 ft.) for a single ladder or individual section of a ladder; (d) 15 m (49 ft.) for an extension ladder having 2 sections; and (e) 20 m (66 ft.) for an extension ladder having more than 2 sections (*WSC Regs*, Sec. 10.26)

Type-Specific Construction Requirements (Wooden): A portable wooden ladder used at a workplace must: (a) Be made of No. 1 structural grade or better spruce or fir; (b) Not be painted other than by being preserved with a transparent protective coating, except for identification markings, which are painted on one side of each side rail, to a maximum of one third of the area of the side rail; (c) Not exceed 6 m (20 ft.) in length; (d) Have rungs: (i) free of knots, (ii) designed to carry a load of 200 kg (440 lbs.) placed at the centre, (iii)

uniformly spaced with a maximum rise of 0.3 m (12 in.), (iv) secured to each side of the side rail of the ladder by at least 3 screws or barbed nails of adequate length or by attachments giving equivalent or better strength, and (v) with filler blocks installed between the rungs; and (e) Have side rails: (i) dressed on all sides and without sharp edges, (ii) with a uniform clear width between them of not less than 0.3 m (12 in.) for ladders 3 m (10 ft.) in length or less, and increasing 0.013 m (1/2 in.) in width for each 0.3 m (12 in.) in excess of 3 m (10 ft.), and (iii) that are free of notches, splices and tapers (*WSC Regs*, Sec. 10.27)

CSA Standards: Portable ladder design, construction and use must meet: (a) CSA Standard Z11-M81, *Portable Ladders*; (b) ANSI A14.1-2000, *Safety Requirements for Ladders – Portable Wood*; (c) ANSI A14.2-2000, *Safety Requirements for Portable Metal Ladders*; or (d) Other similar standards acceptable to the board (*WSC Regs*, Sec. 10.25)

Placement: Worker using a portable ladder must ensure that: (a) Ladders extended to a height of more than 3 m (10 ft.) are effectively secured or held in place by another worker; (b) If the ladder isn't securely fastened, it's placed so that the base of the ladder is no less than one-quarter and no more than one-third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder; (c) The side rails of the ladder extend at least 1 m (3 ft.) above any platform or landing to which the ladder is a means of access; (d) A ladder isn't placed in front of or against a door unless the door is blocked in the open position, locked or guarded; (e) Ladders made of metal or electrically conductive material aren't used when working within 3 m (10 ft.) of energized electrical lines (*OHS Regs*, Sec. 10.29)

Safe Use: Workers using a portable ladder must ensure that: (a) The ladder is appropriate for the task to be performed; (b) The ladder is inspected before use; (c) Any unsafe condition is reported to the employer; (d) The ladder is faced and both hands are used when climbing or descending; (e) When standing on a ladder, the worker stands in the centre between the side rails; (f) the side rails extend at least 1 m (3 ft.) above any platform or landing to which the ladder is a means of access; (g) where extended to a height of more than 3 m (10 ft.), the ladder is effectively secured or held in place by another worker; (h) if it's a stepladder, the legs are securely held in position by means of metal braces or an equivalent rigid support; (i) a stepladder is used only when the front section has a maximum pitch of one in six in the open position; (j) when used as a self supporting unit, the legs of a stepladder are fully spread and the spreader is locked; (k) the worker doesn't work or stand on the top i. two rungs of a stepladder, except in cases where the stepladder is equipped with a railed platform, and ii. three rungs of a portable single or extension ladder; (l) ladders aren't spliced together unless the spliced section is braced so that the spliced side rails are as strong as the original side rails, (m) a ladder isn't placed in front of or against a door unless the door is blocked in the open position, locked or guarded, (n) a ladder isn't used as scaffold flooring or as support for scaffold flooring, (o) ladders made of metal or electrically conductive material aren't used when working within 3 m (10 ft.) of energized electrical lines, and (p) if the ladder isn't securely fastened, it's placed so that the base of the ladder is no less than one-quarter and not more than one-third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder (*WSC Regs*, Sec. 10.29)