

LADDER SAFETY

J A Rosa Construction LLC

Every year workers are injured or killed because of ladder accidents. Injuries can be serious—even from falls at short heights. Some workers who fall from ladders end up permanently disabled.

The good news is that ladder accidents are preventable.

Ladder Selection

Selecting the right ladder for the job.

- A ladder must be the right height for the job. A stepladder should be tall enough so that you do not have to stand on the top two steps, which would leave you nothing to hold on to. A straight or extension ladder should be tall enough so that you do not have to stand on the top four rungs.
- Secondly, a ladder must have the capacity to support the weight that will be on it. Remember that the total weight a ladder must support is your weight plus the weight of any tools and materials you use while working on the ladder. Weight capacity is displayed on a label affixed to the ladder.
- It must meet OSHA/ANSI specifications

Weight rating system:

- **I-A** means the ladder can hold a maximum weight of 300 pounds.
- **I** mean a maximum weight of 250 pounds.
- **II** means a maximum weight of 225 pounds; *and*
- **III** means a maximum weight of 200 pounds.

Ladders are built to hold a limited amount of weight. Ladders must not be used if the weight placed on them is more than what the ladder is built to hold.

The composition of ladder may be a safety issue. Never use a metal ladder around:

- Electricity. Also check for metal parts and pieces and never use a ladder that is wet around electricity.
- Aluminum, steel, and acids are not compatible, so never use a metal ladder around corrosives.
- Finally, do not use metal ladders around flammables—the ladder could potentially cause a spark that could ignite around flammables.

Ladder Inspection

All ladders should be inspected before each use. It does not take long to check out a ladder to make sure it is safe to use. But those few minutes could be the most important of your life.

Depending on the scope of work performed, ladder inspections may be required:

1. (29 CFR 1926) Periodically by a competent person for defects that can be seen and after any event that could make them unsafe to use
2. (29 CFR 1910) Before initial use in each work shift, and more frequently as necessary, to identify any visible defects that could cause employee injury

Check to make sure that:

- Steps or rungs are in good repair and free of mud, grease, oil, or sticky substances.
- Side rails have no cracks or splits.
- Metal parts are lubricated.
- Rope is not worn or frayed.
- Spreaders or other locking devices are in place and working properly.
- Splinters or sharp edges have been filed down.
- Safety feet are solid and in place; *and*
- Metal ladders are free of dents and bent parts.

You should also inspect ladders following any tip overs or damage to a ladder that has been struck by something, hit something, or been dropped.

When you uncover a safety problem with a ladder during an inspection, do not use it. Instead, remove it from service and tag it to make sure nobody else uses it. For example, you could write “DO NOT USE” in big bold letters on a tag and attach it to the ladder where it can be easily seen.

Set Up

When portable ladders are used to reach elevated surfaces, the ladder side rails must extend at least 3 feet above the surface the employees will be stepping onto. A ladder that cannot be extended must be secured to a rigid support that will not cause it to slip or move.

To avoid ladder accidents, you must set up ladders correctly. Remember these setup tips.

- Place the ladder on a firm, level surface, and check to make sure the ladder is stable. Use wide boards under the ladder to give stability if the ground is soft.
- Place the base of the ladder 1 foot from the wall for every 4 feet between the base and the support point
- Never set a ladder on top of a drum, stack of pallets, or other object to gain more height. Use a taller ladder instead. If you set up a ladder on such an unstable base, you are just asking for an accident.

- Never set up a ladder in front of a door unless the door is locked or blocked—or you have someone standing on the other side to keep people from opening the door.
- Never lean a ladder against a surface that is not strong enough to support your weight, such as a window or an object that might move under your weight.
- Never fasten two ladders together for additional height. Instead, use a taller ladder or an extension ladder designed for two-ladder coupling.
- Make sure the spreaders on stepladders are fully extended and locked in place and that locking devices on extension ladders are secured.

Ladders should be used only for the purpose for which they were designed. Never use ladder in a horizontal position or as scaffolding, do not place ladders on top of boxes, barrels, crates, etc.

Place the ladder at a safe angle, usually 4:1 is safe. This angle is defined by OSHA as being one foot out for every four feet up in elevation, which is usually known as a 4:1 ratio.

Also, make sure that the upper section of an extension ladder overlaps and rests on the bottom section. The overlap should always be on the climbing side of the ladder. For ladders of 36 feet or more, the overlap should be least 3 feet.

When working on a ladder, remember these dos and don'ts:

- Do keep one hand on a side rail at all times.
- Do keep your body centered on the ladder. A good rule of thumb is to keep your belt buckled between the rails.
- Do keep your body straight and as close to the ladder as possible.
- Do move carefully and slowly when working on a ladder.
- Do not lean too far in either direction. Overreaching is a major cause of ladder accidents.
- Do not reach too far overhead either. Use a taller ladder to reach higher, if necessary.
- Do not try to reposition the ladder while you are standing on it. Get down and move it.

Think about how you climb and work on ladders. Do you always follow the precautions we have discussed in this and the previous slide?

Ladder Use

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- Do move carefully and slowly when working on a ladder.
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