

RISK CONTROL

Risk Management Guide



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REDUCE RISK. PREVENT LOSS. SAVE LIVES.

Slips, trips and falls risk management guide

Slips and falls are a major cause of injury at home and in business. According to the National Safety Council, 25,000 slip and fall accidents occur daily in the United States; more than 16,000 people die each year as a result

of falls; and one in five emergency room visits is the result of a fall. According to the Occupational Safety and Health Administration, slips, trips and falls account for 15 percent of all accidents and are second only to motor vehicles as a cause of occupational fatalities. The risk of injury is especially a concern to businesses with considerable foot traffic. Employees and other third parties on your premises – visitors, customers, vendors, contractors and subcontractors – could be at risk of a slip, trip and fall accident and injury particularly where unsafe conditions exist. Unsafe conditions are accidents waiting to happen.

OSHA determines guidelines governing the condition of floors, stairs and other walking and working surfaces. The standard, ANSI/ASSE A1264.2-2001 Standard for the Provision of Slip Resistance on Walking/Working Surfaces provides compliance guidance. The National Fire Protection Association (NFPA) and other organizations determine building codes concerning stairs and ramps. In addition, the Americans with Disabilities Act (ADA) has walking surface regulations to allow for wheelchair traction and freedom of movement for people with disabilities. These regulations result in safer conditions for all people, not just those who need improved accessibility.

Three main components are important in reducing slips, trips and falls – walking surface design, walking surface maintenance and awareness training. The information in this guide is presented in line with each of these walking surface types:

- 1– Floors, aisles and passageways;
- 2– Sidewalks and parking lots; and
- 3– Stairways and ramps.

These walking surfaces also can be classified respectively as:

- 1– Indoor same level walking surfaces;
- 2– Outdoor same level walking surfaces; and
- 3– Change in level walking surfaces.

While these walking surfaces share similar hazards, they also have unique hazards based on the walking surface type.

Floors, Aisles and Passageways

Floor, aisles and passageways are of special concern because they are high-traffic areas. Substandard floors multiply the risk of accidents. To avoid accidents, floors, aisles and passageways must be well maintained and well lit. The following requirements will help ensure these areas are up to standard:

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- Build or dress all floors with slip-resistant material. The coefficient of friction (COF) of the floor should not be less than 0.50. The material should be suited to the uses and processes of the area.
- Do not wax, polish or treat floors in any way that compromises their slip resistance by causing their coefficient of friction to become lower than 0.50.
- Appropriately mark permanent aisles and passageways to prevent them from being used as storage areas and thereby creating trip hazards. Such markings also aid inspections.
- Keep floors clear and clean. Keep every floor, working place and passageway free from splinters, holes, loose boards and protruding nails.
- Maintain every workroom floor clean and as dry as possible. Where wet processes are used, maintain drainage and provide false floors, platforms, mats or other dry standing places where practical.
- Ensure aisles and passageways are well lit whenever in use.
- Securely attach carpet or carpet tile used on a ground or floor surface. Ensure the cushion, pad or backing is firm. It should have a leveled loop, textured loop, level cut pile or level cut/uncut pile texture. Fasten exposed edges of carpet to floor surfaces and include trim along the entire length of the exposed edge.
- Keep carpeting in good repair. Immediately repair or replace loose, worn or torn carpeting which presents a hazard.
- Block off any section of a floor, aisle or passageway in need of repairs. If that is not possible, place warning signs near the area to alert people to the damage.
- Where mechanical handling equipment is used, allow sufficient safe clearances for aisles, at loading docks, through doorways and wherever turns or passage must be made. Consult the equipment manufacturer for guidance on recommended placement, clearances and related safety information.
- Clean up non-hazardous material spills immediately. If a hazardous material is spilled, follow government regulations. Until a spill can be cleaned, block off the section of the floor and set up warning signs indicating the spill hazard. (See ANSI Z535.2 for Environmental & Facility Safety Sign requirements)
- Inspect floors, aisles and passageways at least monthly to ensure compliance with the rules listed above. Use a slips, trips and falls checklist during your inspection, and correct any deficiencies immediately. Complete and retain the inspection sheet upon completion of your inspection.

Stairway, ramps and change in level

- Stairway and ramp falls present a special hazard because the change in level can result in a more severe injury. These falls may occur because people are in a hurry or because they are not being alert. However, many occur because stairs, ramps, handrails and guardrails are in substandard condition. Not only can these cause a fall, but they can also prevent a person from being able to stop the fall. They may even make the fall worse by providing a false sense of security. It is important to keep stairs, ramps, handrails and guardrails in superior condition.
- Ensure stairway and ramp walking surfaces have a coefficient of friction of 0.50 or greater.
- Ensure stairways have uniform riser heights and uniform riser tread depths – stair treads not less than 11 inches in depth, measured from nose to riser.
- Ensure stairways and ramps are well lit when in use.
- Keep stairways and ramps unobstructed. Construct curb ramps to prevent obstruction from parked vehicles.
- Install continuous handrails on both sides of stairs with the top of the handrail gripping surface mounted between 34 inches and 38 inches above the stair nosing.
- Install handrails if ramps are more than six feet long, measured at the base.
- Connect handrails securely and firmly for stairways and ramps. Ensure gripping surfaces on handrails are uninterrupted by newel posts or any other obstructions.
- Maintain a clear space between handrails and walls of at least one and one-half inches.
- Place guardrails at exposed (open) sides of stairs, landings, balconies and any platforms that are three feet or more above the floor. Securely and firmly connect guardrails at the correct height.
- Check guardrail openings. To prevent entrapment, openings should be designed to the torso of the smallest user at risk. In areas where children are present, a four inch diameter ball should not be able to pass through the opening, according to the NFPA Life Safety Code®.

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- Securely attach carpeting on stairs or ramps. If a cushion, pad or backing exists, make sure it is firm. The carpet should have a leveled loop, textured loop, level cut pile, or level cut/uncut pile texture. Fasten the exposed edges of carpet to floor surfaces and include trim along the entire length of the exposed edge.
- Keep carpeting in good condition. Immediately repair or replace loose, worn or torn carpeting.
- Keep stairs and ramps dry. Clean spills on stairs and ramps immediately. Until the spill is cleaned, set up "Wet Floor" signs to warn of the spill hazard.
- Design outdoor stairs and ramps so liquid cannot significantly accumulate. Make proper accommodations for snow removal.
- Perform a safety survey of all stairways and ramps on a monthly basis. Use a stairway/ramp checklist. Correct any deficiencies immediately.

Note: Snow removal and adequate drainage to prevent rainwater and ice accumulation can help decrease the chances of falls occurring on parking lot and sidewalk surfaces.

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Sidewalks and parking lots

- Sidewalks and parking lots are vulnerable to changes in weather conditions, and need to be constructed to be slip resistant, even when wet. Snow removal and adequate drainage to prevent rainwater and ice accumulation will decrease the chances of falls occurring on parking lot and sidewalk surfaces. Sufficient lighting is also very important. The following procedures will help ensure your sidewalks and parking lots are in top condition.
- Ensure the sidewalk and parking lot surfaces have a COF of at least 0.50. Do not paint or treat sidewalk and parking lot surfaces in any way if it will bring the friction coefficient to below 0.50.
- Design these surfaces so they will be slip resistant when wet.



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