

Loss Prevention Standards – Casualty Classes

Prevention of Slips

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Managing the risk of slips in the workplace and practical tips to help you prevent accidents occurring.



Prevention of Slips



Introduction

Slips and trips are the single-largest cause of accidents in both public areas and workplaces. They consistently account for around 30% of non-fatal major injuries. Health and Safety Executive (HSE) statistics suggest that a significant number of slip accidents occur when floor surfaces are contaminated (e.g. with water, grease, talc, etc.).

Slips tend to cause a person to fall backwards rather than forwards (which are more common of trip accidents). The point of greatest risk of a slip is when there is minimal friction between the shoe/bare foot and the floor surface.

All employers should assess the risk of slips in the workplace, to ensure the safety of employees, visitors, contractors, etc. Similarly, anyone who is in control of premises needs to manage the risks of slipping.



Assessing the Risks of Slips

A risk assessment helps you understand what sensible precautions are required to control the hazards in your workplace, for example:

- Specifying an appropriate type of flooring for the environment, usage and footfall
- Implementing an effective cleaning regime and inspection system
- Having procedures for attending to spillages and contamination
- Implementing procedures for inclement weather
- Using doormats/entrance mats to stop rainwater being tracked-in and making the floor slippery

You are probably already doing some of these things to protect your employees and visitors, but a risk assessment focused on slip potential will highlight areas where further action is necessary.

The risk assessment process might include a 'heat map'; plotting all slip, trip and fall incidents by location to identify areas of highest footfall and high-risk areas such as wet leisure areas, changing rooms, poolside, station platforms and outside spaces. Some of the key slip hazards you might consider are:

- High potential for spillages or floor contamination – e.g. salad bars, entrances, production areas
- Use of the area – high footfall, tasks being undertaken
- Poor lighting – shadows, glare, natural vs artificial light
- Barefoot areas – swimming pools, spas, changing rooms, showers, bathrooms
- Slopes
- Unsuitable or damaged flooring
- Inappropriate footwear
- Damaged floor surfaces, both internal and external
- Poor housekeeping
- Vulnerable users – elderly or disabled
- Weather conditions – snow, ice, wet weather

As few workplaces stay the same, it is essential to review what you are doing on an on-going basis.

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Practical Steps to Prevent Slip Accidents

There are many simple ways to control slip and trip risks and prevent accidents in your workplace. Here are a few examples:

Stop Floors Becoming Contaminated

- Use entrance matting – be mindful of purpose – water or scraping off dirt for example
- Report and repair leaks from machinery or buildings as soon as is practicable
- Make sure plant and equipment are maintained
- Design tasks to minimise spillages
- Plan pedestrian and vehicle routes to avoid contaminated areas
- Implement spillage reporting and cleaning procedures
- Provide suitable footwear where contamination cannot be prevented

Use the Correct Cleaning Methods

- Avoid wet cleaning methods where possible – use a vacuum cleaner for dry contaminants such as dust
- Make sure that your cleaning method is effective for the type of floor you have
- Allow enough contact time to allow the cleaning solution to remove grease
- Leave floors dry after cleaning or exclude pedestrians until the floor is dry – remember even a well rung mop leaves enough water on the floor to cause a slip
- Remove spillages promptly
- Have effective arrangements for both routine cleaning and dealing with spills
- Use the appropriate detergent mixed at the correct concentration – consult manufacturers' guidance
- Be careful – polishing and buffing can increase the slippiness of floors

Consider the Flooring and Work Environment

- Check for loose, damaged and worn flooring and replace as needed
- Regularly check the slip resistance of flooring throughout its lifespan and record the results – Slip Alert or Pendulum testing would be suitable for this purpose
- Make sure lighting is sufficient and that slopes or steps are clearly visible
- Ensure that a snow and ice clearance risk assessment and procedure has been implemented for areas such as car parks, entrances, etc. See Aviva Loss Prevention Standard *Snow and Ice* for further information

Use the Correct Footwear

- Where floors cannot be kept clean and dry, slip-resistant footwear can help prevent slip accidents. See [Health and Safety Laboratory Grip Scheme Taking Steps Against Workplace Slips](#)
- Consider the work environment when selecting suitable footwear
- Think about tread pattern – close, tightly knitted tread patterns can become easily clogged with contaminants and difficult to clean. Choose a more open tread pattern where this may occur
- Trial footwear first to make sure it is suitable for the environment and for those who will be wearing it, i.e. comfort and fit
- If footwear is supplied as personal protective equipment (PPE), it must be supplied free of charge to employees

Think About People and Organisational Factors

Consider how work is organised and managed, e.g. to avoid rushing, overcrowding and trailing cables.
Make sure employees are involved in the decisions that affect them, e.g. choice of PPE footwear or a change in cleaning methods.

Flooring and Surfaces – Appropriateness to the Environment and Expected Use

When selecting a flooring surface or producing a company floor specification consideration should be given to:

- Potential floor contaminants – water, oil, grease, food, body fats, dry contaminants
- Floor testing requirements – **some tests can be confusing. The pendulum test is still considered the HSE's test of choice**
- Lifespan of the floor – dependent on usage, potential contaminants (e.g. chemical damage), wear and tear. What criteria will be used to determine when the floor requires replacement
- Sloping surfaces – they will need more grip to prevent slips
- Drainage considerations to take away excess water on the floor – make sure they do not increase slip risk

Flooring is given R ratings (R9-R13, where R9 is slippery when wet, and R13 the least slippery) for shod feet and A-C ratings for barefoot. This can be very confusing. The best information is still considered to be the Pendulum Test Values (PTV), and in particular, the PTV in relation to wet and/or contaminated floors. This test is designed to replicate a pedestrian heel strike, the point at which most slips occur. If these are not supplied, then you should ask for them:

- Non-slip flat surfaces should have a minimum of 36 PTV when wet or contaminated to reduce the risk of **slip to less than 1 in 1 million footfalls defined by the HSE as a 'Low Probability of Slip'**
- For slopes - for every 1 degree of slope, the PTV value must increase by 1.75 PTV (use approximately 2 PTV per degree to allow for tolerancing and floor wear)

For further information:

- [UK Slip Resistance Group](#)
- [HSE – Watch Your Steps – E Learning Package](#)

Be wary of tests that can only be carried out in a laboratory such as the ramp test. Whilst useful, it does have its limitations as the test conditions are not representative of real-life scenarios and results can be presented in ways that are misleading, e.g. R9-R13 for the shod test, A-C for the barefoot test.

Some existing floors may be unsuitable and not reach the 36 PTV. There are treatments and work that can be carried out to improve the slip resistance. PTV can be carried out on flooring and action plans put together. Other key points include:

- Ensuring that surfaces are kept in good order
- Promptly repairing damage
- Securing coverings such as mats, rugs and carpets

Housekeeping

Good housekeeping is the most important method of preventing slips, trips and falls. Examples of good housekeeping include:

- Cleaning all spills immediately
- Marking spills and wet areas with appropriate signage
- Mopping spillages or sweeping debris from floors
- Removing obstacles from walkways and always keeping them free of clutter
- Covering cables that cross walkways
- Keeping walkways well lit
- Promptly replacing broken/defective light bulbs and faulty switches

Without good housekeeping practices, any other preventive measures such as installation of sophisticated flooring, speciality footwear or even training on techniques of walking and safe falling will never be fully effective.

Records

The keeping of records, of the specification of flooring, the risk assessment, flooring inspections and maintenance, and perhaps most importantly of cleaning procedures may prove decisive in defending compensation claims.

Key Action Steps

If you have a responsibility for premises:

- New Surfaces: ensure that new flooring surfaces are free from tripping and slipping hazards
- Housekeeping: implement a housekeeping programme
- Entrances: check that flooring beyond matting is not getting wet on rainy days and that mats are big enough and positioned correctly
- Inspections: conduct routine inspections to ensure surfaces are free from hazards
- Maintenance: ensure that routine maintenance is carried out to remedy defects
- Spills: ensure that spills are identified/reported and cleaned up immediately

Case Studies

There is a wealth of case law, both civil and criminal, relating to trip claims, the following are representative examples. The HSE website contains many case studies illustrating both good and bad practice:

- Harvey vs. Woolworths (2004): customer slipped on wet floor when entering the store. Defendant retailer able to demonstrate effective system of cleaning, use of warning signs and absorbent mats
- Carpet retailer: found to have poor floor coverings during routine safety inspection. Fined £8,000 for this and other offences

Checklist

A generic Slips Prevention Checklist is presented in Appendix 1 which can be tailored to your own organisation.

Specialist Partner Solutions

Aviva Risk Management Solutions can offer access to a wide range of risk management products and services via our network of Specialist Partners who are reputable companies offering agreed discounted rates for Aviva customers.

For more information please visit:

[Aviva Risk Management Solutions – Specialist Partners](#)

Sources and Useful Links

- HSE – Assessing the Slip Resistance of Flooring – A Technical Information Sheet
- HSE – Preventing Slips and Trips at Work – INDG225

The above two publications are available at the HSE website, [click here](#)

Additional Information

For more information on this subject refer to the Aviva Risk Management Solutions Guide [Slips, Trips and Falls](#)

Relevant Loss Prevention Standards include:

- Prevention of Trips
- Snow and Ice Clearance

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at riskadvice@aviva.com or call 0345 366 6666.*

*Calls may be recorded and/or monitored for our joint protection.

Appendix 1 - Prevention of Slips Checklist



| | |
|-----------------------------------|--|
| Location | |
| Date | |
| Completed by (name and signature) | |

| | External | Y/N | Comments |
|----|--|-----|----------|
| 1. | Is there enough lighting around the workplace for employees and visitors to be able to see and avoid slip hazards that might be on the ground? | | |
| 2. | Are regular, documented inspections undertaken to identify potential hazards, ensuring that any remedial work identified is implemented? | | |
| 3. | Are materials used for external paved areas slip-resistant when wet, adequately cleaned and maintained, to ensure they remain that way? | | |
| 4. | Do you discourage individuals from taking shortcuts over grass or dirt which are likely to become slippery when wet? | | |
| 5. | Have you considered fitting canopies over building entrances to reduce the amount of water walked-into the building? | | |
| 6. | If a canopy isn't a possibility, have you considered installing absorbent mats, which are securely fixed, to keep floors clean and dry? | | |
| 7. | Is entrance flooring non-slip and is a cleaning regime in place to keep it that way? | | |
| 8. | Do you have a procedure for keeping up to date with the weather forecast, and are you able to respond to the forecast? | | |

| | External Contd. | Y/N | Comments |
|-----|---|-----|----------|
| 9. | Do you have procedures to prevent any icy surfaces forming, or keeping pedestrians away from slippery surfaces? | | |
| 10. | Do you use salt and grit to remove snow and ice on paths and carparks? | | |

| | Internal | Y/N | Comments |
|-----|--|-----|----------|
| 11. | Are regular, documented inspections undertaken to identify potential hazards, ensuring that any remedial work identified is implemented? | | |
| 12. | Are there any areas with variations in floor level (e.g. slopes, small steps), or changes from one floor material to another? | | |
| 13. | Are all floor surfaces in good condition and kept clean and dry? | | |
| 14. | Is slip resistant footwear worn where risk assessments identify a need? | | |
| 15. | Are there any slip hazards around workstations, e.g. floor contaminants? | | |
| 16. | Are documented cleaning schedules in place to ensure surfaces are kept clean and dry? | | |
| 17. | Are there procedures to immediately clean up any spillages? | | |

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| | General | Y/N | Comments |
|-----|---|-----|----------|
| 18. | Have the results of the slips, trips and falls risk assessment been communicated to all relevant individuals? | | |
| 19. | Has the provision of appropriate slip-resistant footwear been considered as part of the relevant risk assessment? | | |
| 20. | Are employees encouraged to report any issues which they consider to be unsafe? | | |
| 21. | Are slip accidents thoroughly investigated to identify root causes, even if they are considered trivial or no-injury accidents? | | |
| 22. | Additional comments: | | |

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