

Aware 365 Hazard Guide for Plumbers

Risk Category	Work Condition Examples	Risks	Management – Employer	Management – Worker
Powered Tools and Hand Tools	Electric drills, welding equipment, grinding tools, pipe cutters and hacksaws	Injuries to hands, fingers, eyes; can lead to long periods away from work/ permanent disability.	Faulty items of electrical equipment must be immediately removed from service & tagged (FAULTY – DO NOT USE), ensure workers are provided with the <i>appropriate tools</i> for a task, personal protective equipment (PPE) to be worn when hazards cannot be eliminated or sufficiently reduced, provide maintenance program, training and PPE.	Wear personal protective equipment provided by the employer, operate equipment correctly and safely according to your training, concentrate on the job.
Prevention of Falls	Work on roofs, installing or repairing gutters and downpipes, accessing roof cavities through manholes.	Falls are a major cause of workplace deaths and injuries each year.	Ask yourself: <i>'is it necessary to do this work at heights?'</i> , Establish safe systems of work for each job, assess need for/ ensure training/licencing and use of: Scaffolding, EWP, fall protection devices, work positioning system, safe ladder use.	Exercise duty of care and operate equipment safely and according to training and licencing requirements.
Manual Handling	Handling heavy and awkward objects, often in uncomfortable postures.	Traumatic injury such as back strain, 'overuse' injuries, affecting neck, back, hand and arms over a period of time.	Arrange and monitor work to minimise risk, provide instruction, training and supervision, organise work to: reduce the number of manual handling tasks, ensure work place layout allows enough space to move and work safely and comfortably, ensure no long periods requiring strenuous manual handling activity.	Talk to their employer or supervisor if job is too heavy or too difficult, or if worker feels it may put him/her at risk of injuries.
Hazardous Substances & Dangerous Goods	Chemicals used to carry out work, or present in the work environment including: oxy-acetylene, fluxes (solder), lead, hydrochloric acid, degreasers and solvents, adhesives, caulking compounds, lead (flashing, PVC products, lead solder and a number of plumbing fittings all contain lead), natural gas.	Poisoning from short or long term exposure to poisons. Lead is a cumulative poison. It is toxic to virtually every human organ and can have serious long term health effects.	Ensure there is a safe system of work including: identify lead hazards, assess risks of exposure using alternatives to lead, reinforce need to: wash hands thoroughly before eating & change clothes at the work site when the job is done, provide appropriate personal protective equipment (PPE), keep up to-date material safety data sheet (MSDS) for each substance used in your work.	Use hazardous substances according to training and the manufacturer's written instructions provided on the material safety data sheet (MSDS), plumbers working with gas supply must follow safe systems of work, operate equipment correctly and safely according to training and licencing requirements.
Biological Hazards	Sewage exposure including to <i>tetanus</i> , <i>hepatitis A</i> , and parasites such as <i>giardia</i> and <i>cryptosporium</i> , soil, sharps	Microbes in raw sewage can enter the body through the nose or mouth, through open wounds or by inhaling (in dust, for example) and can lead to severe illness.	Evaluate possible risks of exposure, follow required hygiene practices, provide appropriate PPE. Have first aid and emergency procedures in place to deal with any possible contamination ensure First Aid and emergency procedures are documented and understood by workers, inform workers of the health hazards of contact with sewage, ensure that workers have been vaccinated against tetanus and diphtheria and hepatitis A.	Know what to do if incident occurs, assume anything touched by sewage is contaminated, do not eat or drink in sewage handling area, wash hands before eating or drinking, and after touching any surface or object ,wash and disinfect any wound that comes into contact with sewage, change out of work clothes before leaving the work site, wear appropriate PPE. Most of the precautions outlined above will also apply to work with soil; workers unable to see the cause of a blockage in pipes, gutters or downpipes should not feel around for objects with an unprotected hand, as a needle stick injury could easily occur.

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Electricity	Power tools, tools in proximity to water supply, electrical wiring in wall, insulated hot water pipes, work at roof line or on roofs also has potential for contact with overhead power lines.	Electrocution leading to serious injury or death.	Instruct workers to assume that ALL hot water lines have heat trace cables attached until they have inspected the pipes and established that it is safe to go ahead, require that plumbers assess the potential risks before starting work.	Assess risks of electrocution before starting work, only when <i>all</i> hazards have been identified can the risks be assessed and controlled.
Burns	Maintenance and repair of hot water systems.	Hot water services store water at high temperatures. The unexpected release of hot water or steam could result in serious injury and permanent disfigurement.	First Aid and emergency procedures must be clear, work systems must be in place to ensure the job can be done safely, ensure no worker is left to work alone where there is any possibility of a disabling incident such as a steam burn.	Plumbers should be able to provide basic first aid to a fellow worker if necessary. Where possible, hot water systems should be switched off and allowed to cool before work begins.
Trenches, Hazardous and Confined Spaces	Work in trenches, pits, tanks, beneath houses and in roof cavities	In areas effected by sewage and stormwater, the release of toxic gases can cause collapse, unconsciousness and death. Lack of oxygen is also potentially fatal. Trench collapse can cause entrapment and result in death	Ensure full assessment worksite before work starts, identification of any potentially unsafe atmosphere, work practices in place to ensure no possibility of a worker being overcome e.g. breathing apparatus, lifeline is attached to the worker, ensure no person should work in a confined space without a second worker (outside the space) to monitor safety, trenches must be constructed and reinforced to ensure no possibility trapping workers.	In the event of a person collapsing in a confined space, the second worker must not enter the space for rescue, rescuers must be specifically equipped and trained to do so. In residential plumbing work, trenches will usually be shallow, but risks must still be assessed before the job begins.
Sunburn and Heat Stress	Working for long periods in the sun and in periods of high humidity, work in enclosed spaces and work in trenches or pits where temperatures can become high.	<i>Short-term:</i> heat stress, blistering and peeling of previously sun affected areas, acute skin reactions with certain drugs and skin creams, and sore, swollen eyes. <i>Long – term:</i> skin cancers, premature ageing, wasting skin tissues, clusters of tiny blood vessels and cataracts in the eye.	Prior to work commencing consider: available shade, frequency of rest breaks, need for regular rehydration (water, not soft drinks), awareness of each worker's heat tolerance; ensure: use of protective clothing and sunscreen.	Exercise own duty of care by wearing of protective equipment and sunscreen and monitoring weather/ trench or tunnel conditions and hydration

NB. In all cases, the employer/PCBU must ensure that all hazards and control measures are explained for each task before starting work. Workers must be provided with instruction, training and supervision. Workers must know the First Aid and emergency procedures.

Workers must know and follow safe working procedures – not just for their own safety, but also for the safety of others working with them.

Hazards associated with plumbing may change at any time based on the task and location and environmental conditions. This information is not definitive and is meant as a guideline for the development of a safety systems adaptable to all site based hazards and risks.

