



Chemicals and Hazardous Substances

Many different chemicals and other hazardous substances are used daily in shops, fast food outlets and warehouses. Many more are kept in stock for eventual use within the establishment or for sale to the public.

Most of these substances can be dangerous if not handled carefully and correctly. Some chemicals are so dangerous that they should not be used or kept in stock unless proper safeguards are present to protect those handling them.

Hazardous Substances

The more dangerous types of chemicals – known as Hazardous Substances – are classified into several key groups:

Very Toxic

Capable of causing death or very serious health problems after relatively small exposures.

Toxic

Capable of causing death or serious health problems after exposure.

Harmful

Capable of causing health problems after larger or long-term exposures.

Corrosive

Capable of destroying materials or lung tissue e.g. (skin) on contact.

Irritant

Capable of irritating or inflaming the skin, eyes or respiratory system e.g. dermatitis, bronchitis.

Sensitizing

Capable of causing allergic reactions, e.g. asthma, skin allergies.

Carcinogens

Capable of causing cancer.

Mutagenic


Capable of causing damage to genes.


Teratogenic


Capable of causing birth defects.

How can we be exposed?

In the workplace, Hazardous Substances can enter the body in one of three possible ways:

 Inhalation – breathing the substance in;

 Skin absorption – contact with the skin;

 Direct ingestion – can be accidentally swallowed (by eating or smoking with contaminated hands).

Health effects may be acute, resulting from short-term exposure, or chronic resulting from long-term exposure over a period of time.

Hazardous Substances in the retail industry

Sectors of the retail industry which handle Hazardous Substances include:

- ☠ Department and bulk stores
- ☠ Petrol stations
- ☠ Supermarkets and grocery shops
- ☠ Newsagents and stationers
- ☠ Pool chemical supply shops
- ☠ Photo processing outlets
- ☠ Timber merchants
- ☠ Paint shops
- ☠ Plant nurseries
- ☠ Hardware and plumbing merchants
- ☠ Electronics shops
- ☠ Pharmacies
- ☠ Hairdressers and beauty salons
- ☠ Fast food outlets
- ☠ DC

Some substances sold or distributed by these service outlets are hazardous. The following products, or some of their ingredients, are hazardous substances:

- ☠ Photo processing chemicals
- ☠ Adhesives and sealants
- ☠ Garden and pet supplies
- ☠ Cleaning agents and detergents
- ☠ Pesticides
- ☠ Paints
- ☠ Agricultural and veterinary chemicals
- ☠ Pool chemicals
- ☠ Hairdressing chemicals

Employers have a duty of care to protect employees from harmful chemicals.

They must:

- ☠ Ensure that all containers of hazardous substances are appropriately labelled.
- ☠ Carry out assessments for hazardous substances used in the workplace and undertake any subsequent actions that may result from the assessment.
- ☠ Induct and train all staff who may be exposed, or have to handle hazardous substances in the workplace.
- ☠ Ensure that Material Safety Data Sheets (MSDS) for all hazardous substances used in the workplace are readily accessible to all employees.

Control Strategies

- ☠ Eliminate work activities involving the handling or use of a hazardous substance that are not essential.
- ☠ Substitute a less hazardous substance, the same substance in a less hazardous form or the same substance in a less hazardous process.
- ☠ When storing hazardous substances or dangerous goods, consider the need to keep chemically incompatible substances away from each other (the MSDS should have information about safe storage.)
- ☠ Check that there is adequate exhaust ventilation – to extract dust and fumes.
- ☠ Reduce staff contact with hazardous substances.
- ☠ Ensure that all staff handling hazardous substances are adequately trained.
- ☠ Appropriate equipment should be available for stacking chemicals on shelves and handling stock.
- ☠ Safe work practices should be adopted, such as prohibiting smoking and the consumption of food by people entering areas where hazardous substances are stored or used.

- ☠ Use of personal protection equipment such as Australian New Zealand Standard approved goggles, Australian Standard approved respirators and PVA or PVC gloves. (Using personal protective clothing and equipment should only be a last resort.)

Premises where hazardous chemicals are stored should be adequately **ventilated**.

Some hazardous substances are dangerous goods and should be stored accordingly. For example, pesticides should not be stored with foodstuffs.

The **lighting** level should be adequate and sufficient to allow easy reading of product labels and routine inspection of stored products.

Aisles and emergency exits must be kept clear at all times in accordance with statutory requirements.

Emergency Procedures

Employers should provide instruction and training to staff on emergency procedures for controlling spills and leaks, and each site carrying hazardous substances should have an emergency spills/clean up kit. It should comprise the following:

- ☠ diatomaceous earth bags (kitty litter) or sand;
- ☠ mop;
- ☠ suitable disposal container;
- ☠ shovel;
- ☠ yard broom;
- ☠ dustpan and brush;
- ☠ lengths of rope approximately four metres long (for cordoning-off spills);
- ☠ signs reading 'Warning, Spillage – Do not Enter' in red on white;
- ☠ yellow or orange cones with the appropriate sign attached to the top;
- ☠ appropriate goggles that meet the Australian/New Zealand Standard;
- ☠ sufficient number of suitable protective gloves;

- ☠ if required, appropriate respirator and filter that meet the Australian Standard; and
- ☠ a generic emergency procedure that is easy to read and laminated.

These should be kept as a kit and the storage location should be shown to all staff members. The equipment in this kit should only be used for cleaning up hazardous substances, not for general use.

All staff that have the potential to be exposed to accidental spills of hazardous substances should be trained in how to clean up emergency spills using the emergency clean up kit.

If personal contact with a hazardous substance is made, read the label, MSDS or a generic emergency procedure, if available, for first aid advice. Seek medical attention should it be necessary.



Types of hazardous products

The following is included only as a guide to the types of products that may be considered as hazardous. To determine if a substance is hazardous, refer to the List of Designated Hazardous Substances or Approved Criteria for Classifying Hazardous Substances. The List of Designated Hazardous Substances contains a list of entries, which can also be used to determine if an ingredient of a substance is hazardous.

Oil-based paints, paint strippers (PS), paint thinners (PT) and anti-fouling paints (AFA):

- ❖ methylene chloride;
- ❖ pigments:
 - cadmium
 - lead
 - chromium
 - resins
- ❖ solvents:
 - dichloroethane
 - turpentine (PT)
 - ammonia
 - dichlorobenzene
 - butanol
 - propylene glycol
- ❖ extenders
- ❖ plasticisers
- ❖ organ copper compounds (AFA)

- ❖ petroleum spirit/turpentine (PT)
- ❖ varnishes:
 - epoxy resin

Garden and pet supplies:

- ❖ algaecides
- ❖ fungicides
- ❖ weed-killers
- ❖ rodenticide
- ❖ insecticides
- ❖ miticides
- ❖ herbicides

Water and pool chemicals:

- ❖ calcium hypochlorite
- ❖ liquid aluminium chloride
- ❖ trichloroisocyanuric acid
- ❖ sodium bisulphate
- ❖ sodium carbonate
- ❖ sodium hypochlorite

Cleaning agents and detergents:

- ❖ bleach
- ❖ sodium hypochlorite (>5% chlorine)
- ❖ mould removers
- ❖ surface (abrasive) cleaners
- ❖ all purpose cleaners
- ❖ carpet cleaners:
 - glycol ethers
- ❖ drain and oven cleaners:
 - caustic soda
- ❖ laundry detergents:
 - phosphates
 - silicates
- ❖ dishwashing detergents
- ❖ dry cleaning agents:
 - tetrachloro ethylene
- ❖ prewash cleaners:
 - trichloroethane
- ❖ degreasing agents

- ❖ metal cleaners:
 - ammonia
- ❖ polishing agents:
 - floor and furniture polishes
 - naphtha
 - nitrobenzene
 - formaldehyde
- ❖ toilet cleaners:
 - para dichlorobenzene
- ❖ window cleaners:
 - glycol ether

Other chemicals

- ❖ solvents:
 - acetone
 - methanol
- ❖ sealants and adhesives:
 - glues
 - urea formaldehyde
 - epoxy resin
 - toluene, xylene
- ❖ correction fluid
- ❖ batteries:
 - lead
 - acid
 - cadmium
- ❖ refrigerants:
 - ammonia
- ❖ antifreeze:
 - ethylene glycol
 - methylated spirit
- ❖ silver-fish repellent:
 - naphthalene (moth balls)
- ❖ pesticides/insecticides:
 - organochlorins
 - organophosphates
 - fumigants
 - carbamates

Source: *Guidance Note of the Control of Workplace Hazardous Substances in the Retail Sector. Worksafe May 1994.*

Protective clothing

If a safer alternative chemical is not available and other control measures are not viable, then the following items of protective clothing and equipment should be available for all workers in appropriate sizes:

- ☒ elbow length PVC gloves for use when spraying and cleaning of spills etc;
- ☒ garden gloves – for handling bulbs and potting mix etc. (if working in the garden department);
- ☒ face mask/shield for use when spraying;
- ☒ chemical safety goggles – for use when mixing and using chemicals; and
- ☒ overalls/apron – to prevent splashes of chemicals onto clothing which can then be absorbed into the skin.



Employee rights

- ☒ You have the right to information about the chemicals you are coming into contact with.
- ☒ You have the right to be trained in safe procedures for handling spillages and chemicals and in handling potting mix.
- ☒ You should be provided with adequate protective clothing and equipment.

For more information, contact your Union Organiser, or call your Union Occupational Health and Safety Officer.



A Message from Your Secretary, Paul Griffin

The workplace can be a dangerous place.

Many chemicals and hazardous substances are used in workplaces or kept for sale to customers.

Make sure that you protect yourself from these substances – make sure that they are labelled, stored and handled properly.

If you have any problems in your workplace, contact the SDA.



For more information on chemicals and hazardous substances, contact the SDA:

Write to	Launceston Office (main Office) 72 York Street, Launceston Tas 7250	Hobart Office 75 Patrick Street Hobart Tas 7000
Phone	(03) 6331 8166	(03) 6234 1118
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