Risk Assessments

Pesticide Safety Technical Note

Number 10

OFFICIAL

Contents

Occupational Health and Safety Act 2004

The Occupational Health and Safety Act 2004 (the Act) is designed to provide a broad framework for improving standards of workplace health and safety. The aim is to reduce work-related injury and illness by protecting employees' health, safety and welfare at work. In turn the Act also protects the public from the health and safety risks of business activities by eliminating workplace risks at the source. The design and implementation of health, safety and welfare standards should involve employers, employees and their organisations.

Occupational Health and Safety Regulations 2017

Sections of the Occupational Health and Safety Regulations 2017 (the Regulations) set out specific duties applicable to employers, manufacturers, importers and suppliers which aim to protect people at work against risks to their health associated with the use of hazardous substances.

Hazardous substances are substances that have the potential to harm human health. Many pesticides are classified as hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals. Safe Work Australia has developed a Hazardous Chemical Information System as an advisory service to determine what chemicals have been classified using the above mentioned system.

If a chemical is not classified as a hazardous substance, it does not necessarily mean that it is harmless. Moreover, employers have general duties under the overarching Act to ensure employees' health is not at risk. As pesticides are designed to kill or cause harm, they should all be considered hazardous even if they are not officially classified as such. It is advisable, therefore, to adhere to the requirements under the Regulations for all pesticides used in the course of the business of a Pest Control Operator (PCO).

Summary of the Regulations

For any hazardous substances:

Manufacturers, importers and suppliers must:

Determine if the substance is hazardous as well as prepare and provide the relevant information (Safety Data Sheet (SDS) and label.

Employers must:

- ensure containers are labelled
- obtain the SDS and make it available to employees
- keep a register of substances that includes product names and SDSs
- undertake and record a pesticide health risk assessment
- review and revise risk assessments
- eliminate or control risks to health according to the hierarchy of controls
- ensure risk control measures are properly used and maintained
- conduct atmospheric monitoring and health surveillance in certain circumstances
- provide information, instruction and training to employees
- consult with Occupational Health and Safety (OHS) representatives
- perform additional duties for scheduled carcinogens.

Employee Obligations:

Your employer is required to protect you from risks in the workplace.

At the same time, you have a general duty to take reasonable care for your own health and safety, and that of others who may be affected by your work, and to cooperate with your employer's efforts to make the workplace safe.

This may include, following workplace policies and procedures, attending health and safety training and helping to identify hazards and risks.

What is a risk assessment?

A risk assessment is a process of determining the likelihood of an adverse health effect associated with potential exposure to hazardous substances in the workplace. In other words, it is trying to work out whether the pesticide you are using is likely to affect your health because of the nature of the pesticide and how it is handled or used.

An assessment may be conducted for a work process and may cover more than one hazardous substance.

When conducting a risk assessment, the Regulations require you to consider:

- each hazardous substance used
- the information on the SDS
- the information on the manufacturer's or importer's label
- the nature of the work involving the use of each hazardous substance
- any information on incidents, illnesses or diseases associated with use of the hazardous substance.

Why perform a risk assessment?

PCOs are potentially at greater risk of exposure to pesticides as they use them on a daily basis. Poisoning may occur shortly after a single exposure (acute poisoning) or gradually after repeated exposures over a period of time (chronic poisoning). Therefore, PCOs need to take greater precautions.

In addition to the risk assessment requirements of the Regulations, it is advisable to perform a risk assessment:

- to eliminate or minimise the risks to health
- to prevent accidents ***before*** they occur
- to encourage and introduce safe work practices by identifying the risks
- to ensure that relevant factors are properly considered.

How to conduct a risk assessment?

Decide who should carry out the assessment

The person or people chosen must have a thorough knowledge and understanding of the work practices involved with the particular pesticide under consideration

Consider the substance

For the pesticide under consideration, obtain and thoroughly review the manufacturer's or importer's Safety Data Sheet (SDS) and product label. These can be obtained from your chemical supplier, chemical manufacturer, or online at www.msds.com.au.

To assess the risks to health effectively, you should find out how the hazardous substance and any substances generated through its use may be harmful to health.

You also need to consider the routes of exposure, the form of the pesticide, the chemical and physical properties and potential health effects.

Consider the nature of the work

The way in which a pesticide is used or handled will affect the level of exposure and therefore the risk to employees' health. Different tasks associated with a particular job present different levels of risk. Therefore, you need to divide the job into the different tasks and assess or consider them separately. For instance, you might decide that the four main tasks are:

- loading, unloading and transportation of the pesticide
- mixing or decanting of the pesticide
- application of the pesticide
- spill management and clean up.

For each task, consider who is at risk of exposure, how often, for what period of time, the quantities and concentrations involved, the specific handling/application techniques used and the controls or safety measures currently in place to minimise or prevent exposure. In addition to employees, you should consider clients, other members of the public, pets, and the environment.

Evaluate the risk

Once you have thoroughly reviewed all available information about the pesticide and considered all of the ways that it is used in your business, you should then decide whether the controls you currently have in place to prevent or minimise exposure are adequate, or if some form of injury or illness resulting from exposure to the chemical is likely. If you are uncertain about the risk to employees' health, you should get further information or assistance. Any conclusion that you form needs to be supported by clear and valid evidence or reasoning.

Generic assessments

A single generic risk assessment may be conducted where one or more hazardous substances are used in the same or similar circumstances at more than one workplace or work area. When doing a generic risk assessment the employer needs to ensure that all the risks associated with the hazardous substances are taken into account.

This means that you do not need to do a risk assessment for every job or site if the same pesticide is used in the same or similar ways under the same or similar circumstances.

Controlling the risks – the hierarchy of control

After conducting a risk assessment, you should identify and implement all practicable measures for eliminating or reducing the likelihood of injury, illness or disease. Risks to health should be controlled according to the hierarchy of control specified in the Regulations. The hierarchy is simply a list of control measures that must be applied as far as practicable in the priority order specified.

The Regulations specify a **4-level hierarchy**:

Level 1 – elimination

Elimination is the most effective control measure and involves the removal of the risk by changing work processes or ceasing use of the product. Where elimination is not practicable, you need to reduce the risk as far as practicable by applying the controls in the order specified below.

Level 2 – substitution, isolation, or engineering controls

- ***Substitution*** – involves replacing currently used pesticides with substances that are less hazardous/toxic or available in a less hazardous form (eg: pellets instead of dust)

- ***Isolation –*** involves separating people from the pesticide by distance or barriers to prevent or reduce exposure (eg: extension nozzle)
- ***Engineering –*** engineering controls are physical controls that eliminate or reduce the generation of substances, suppress or contain substances, or limit the area of contamination in the event of spills and leaks (eg: bunting of chemical storage shelves, separation of driver's cabin from chemical storage area on vehicle, the use of coarse spray nozzles or exhaust ventilation in a chemical storage shed).

Level 3 – administrative controls

Administrative controls need to be implemented where the control measures in level 2 are not practicable or do not adequately reduce the risk.

Administrative controls are systems of work or safe work practices which help to reduce employee exposure to pesticides and include such things as: ensuring lids of pesticide containers are replaced securely when not in use, cleaning up spills immediately, prohibiting eating, drinking and smoking while using pesticides, providing training to staff, and ensuring regular cleaning of work vehicles and PPE.

Level 4 – personal protective equipment (PPE)

Where the control measures in levels 2 and 3 are not practicable or do not adequately reduce the risks then appropriate PPE should be used in accordance with the product label or SDS. It is likely that PPE will usually be used in combination with other control measures.

Recording the risk assessment

The Regulations require that the results of the risk assessment be documented. Risk assessment records should include the:

- names of the assessors
- date of the assessment
- workplace or processes involved
- name of the substance
- current controls in place to prevent a risk to health
- degree of exposure or nature of risk identified
- reasons or justification for decisions made about the risk
- results of any monitoring (atmospheric/health).
- Recording the risk assessment should also help you to identify appropriate additional risk control measures. It needs to be made available to any employee potentially exposed to the pesticide. The level of detail in the risk assessment will depend on the level of risk involved.

Reviewing and revising risk assessments

The Regulations state that risk assessments must be reviewed and, if necessary, revised if the work activity or process changes significantly or if the risk assessment no longer adequately assesses the risk associated with the use of a hazardous substance. Otherwise, they must be reviewed at least every five years. The department recommends reviewing risk assessments **annually** as part of general business practices. This will involve obtaining the most recent SDS and label for the particular pesticide under review.

REMEMBER: Reducing risks PROACTIVELY is better than dealing with the impacts and losses REACTIVELY.

To receive this document in another format, email Pesticide Safety <pesticidesafety@health.vic.gov.au>.

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