

Primary Industries HSC

Chemicals



Study Notes

Syllabus dot points are covered in this template. Use your notes from class, handouts, textbook and research to summarise information for each dot point.

Name: _____

1. **Types**

a) Name types of chemical formulations used in primary industries:

– dry

– liquid

b) List a range of types of chemicals commonly used in a primary industries workplace/enterprise and their mode of action

2. **Equipment**

a) Identify range of chemical application equipment:

- List the name and general features of some equipment

- Compare the purpose and limitations of these equipment

b) List factors that influence consideration for selection of equipment:

- task/job requirements

- environmental factors

c) Demonstrate working knowledge:

- List the steps involved in pre-operational safety checks
- List steps to prepare for use
- Describe safe work practices for operation of equipment
- Describe measures used to minimise environmental impact
- How could you ensure your chemical output is correct?

d) Identify faults in chemical application equipment:

- List signs of poor performance and inefficiency

- List common faults:

- malfunctions

- worn, broken or missing components

- Determine solutions to a range of common faults

d) Describe maintenance procedures:

- Describe how you could maintain the equipment during operation and monitor performance

- List steps in cleaning and decontamination

- Explain the benefits of scheduled servicing

- Why is it important to keep operational records?

- Outline the storage requirements for chemical application equipment

3. OHS

- [illegible]

- Describe cleaning requirements for PPE

- How would you store PPE?

c) Minimising risk of poisoning to workers using chemicals:

- Describe the following paths of entry and the likelihood of these occurring:

- Inhalation

- Absorption

- Ingestion

- Injection

- Evaluate methods for limiting exposure to chemicals

- Describe first aid procedures for chemical poisoning

e) List the potential hazardous effects that are associated with the use of chemicals for the following:

- Human

- Animals

- Environment

4. **Chemical compliance**

a) The handling and use of chemicals in a primary industries environment:

- What legislation governs the use of chemicals in primary industries?

- What is the purpose and intent of this legislation?

- Why is it important to follow the manufacturer's guidelines when using chemicals?

- Why is it important to follow enterprise policies and procedures when using chemicals?

b) What licences do you need to use chemicals?

5. Working with chemicals

a) Use and interpret chemical labels and MSDS

- What sort of information is provided on a chemical label and MSDS?

- What do the symbols on chemical labels and MSDSs mean?

b) Methods and techniques for measuring and calculating chemical use

- Why is it important to be accurate when using chemicals?

- Name the units of measurement that could be used when mixing and applying chemicals

- List types of measuring equipment required when handling chemicals

- Describe the importance of calibrating chemical equipment prior to use

- List the calculations performed when calibrating a hand sprayer

- Outline the procedure for mixing chemicals

c) Outline the procedure for loading chemicals into application equipment

d) Describe how you would ensure you are performing safe and effective chemical application, including:

- How would you assess and record meteorological conditions and forecasts?

- How would you follow a spray application plan?

- What are re-entry and withholding periods?

e) Outline how you would deal with a chemical spill in a workplace

f) Explain the cleanup procedures related to working with chemicals, including:

- Requirements for disposal of:

- Excess chemical

- Waste

- Containers

- What is triple rinsing?

g) Explain the purpose and importance of recording and reporting chemical use:

- Why do you need to keep an inventory?

- When might you need to give a pre-treatment notification and to who?

- What application details do you need to keep and why?

h) Outline the storage requirements for chemicals

i) Outline the transport requirements when handling chemicals

6. **Integrate Pest/Resistance Management**

- a) Describe the purpose of integrated pest/resistance management, including an explanation of how resistance occurs.

- b) Outline strategies for integrated pest/resistance management

c) Evaluate alternatives to chemicals for pest/resistance management