

## Hazardous Substances and Dangerous Goods

### 1. Overview

- 1.1 Chapter 6 (Hazardous Substances) and Chapter 6A (Dangerous Goods) of the [NSW OH&S Regulation 2001](#) impose significant legal obligations on employers to ensure that hazardous substances and dangerous goods (HS&DG) do not injure people or damage the workplace. The Regulation also imposes significant legal obligations on manufacturers and suppliers of chemicals intended for use at work.
- 1.2 A hazardous substance is any substance that has the potential to cause harm to the health or safety of people in the workplace. This is a very broad definition and is intended to include all hazardous substances, whether they are produced or used in the workplace.
- 1.3 Dangerous goods are defined under the [ADG \(Australian Dangerous Goods\) code](#). These substances are classified according to the acute effects a single exposure and/or incident may have on life, health, property or the environment. There are 9 classes of dangerous goods. Each class has a [dangerous goods diamond](#) which contains the:
  - diagram or symbol of the class hazard
  - class name
  - class number

### 2. Register of Hazardous Substances and Dangerous Goods (HS&DG)

- 2.1 A register of all HS&DG used in the workplace must be kept (see section 13.2 Local registers of the [UWS Laboratory Safety Guidelines](#)).

### 3. Material Safety Data Sheets (MSDS)

- 3.1 Material Safety Data Sheets (MSDS) provide critical safety, toxicological and physical data to allow the safe handling and storage of chemicals in the workplace. MSDS must be provided by the supplier or manufacturer of the product.
- 3.2 MSDS must be kept with the register of HS&DG. Refer to Section 13 of the [UWS Laboratory Safety Guidelines](#) for further information on the register and Chemical Safety in general.
- 3.3 The OHS Regulation requires that copies of MSDS must be readily accessible to employees who are required to use or handle hazardous substances or dangerous goods. Methods of access to MSDS should be discussed in consultation with employees and include:
  - paper copy collections
  - computerised MSDS databases (e.g. online or cd rom)
  - microfiche copy collections with the appropriate reader
- 3.4 Local areas should ensure that:
  - MSDS are current and less than 5 years old
  - employees are trained in how to access information in MSDS

#### **4. Risk Assessments**

- 4.1 Risk assessments are required to be conducted for all HS&DG stored and used in the workplace. Refer to section 13.4 Risk Assessments of the [UWS Laboratory Safety Guidelines](#) for further information.
- 4.2 The risk assessment should be conducted using the [Laboratory Risk Assessment Form](#), with reference to the [UWS Hazard Identification, Risk Assessment and Control Procedure](#).

#### **5. Safety Equipment**

- 5.1 The appropriate fixed safety equipment must be installed and accessible (e.g. safety showers, emergency eye wash, fume cupboards). Refer to section 7 Safety Equipment of the [UWS Laboratory Safety Guidelines](#) for further information.
- 5.2 The type of personal protective equipment (PPE) to be worn will be determined by the nature of the work being conducted and the outcomes of the risk assessment. Refer to section 7.4.1 Personal Protective Equipment of the [UWS Laboratory Safety Guidelines](#) for further information.
- 5.3 The minimum requirements for PPE when handling HS&DG in laboratory areas are:
- a properly fastened laboratory coat
  - non-slip, closed in shoes
  - Australian Standards approved safety glasses, goggles or eye protection

Refer to section 7.4.1 Personal Protective Equipment of the [UWS Laboratory Safety Guidelines](#) for further information.

#### **6. Labelling**

- 6.1 All containers used for the storage of chemicals and reagents must be labelled in accordance with the relevant regulations. Refer to section 13.5 Labelling of the [UWS Laboratory Safety Guidelines](#) for further information.

#### **7. Storage**

- 7.1 All HS&DG should be stored in a secure and approved lockable storage facility which is suitably placarded. Refer to section 13.6 Storage & Handling of Chemicals of the [UWS Laboratory Safety Guidelines](#) for further information.
- 7.2 All HS&DG should be stored according to instructions on the MSDS and legislative obligations. Refer to section 13.6 Storage & Handling of Chemicals of the [UWS Laboratory Safety Guidelines](#) for further information.
- 7.3 In order to reduce the level of risk to the lowest possible level, HS&DG should be kept from people, property and the environment by means of physical separation (e.g. distance or barriers). Refer to section 13.6 Storage & Handling of Chemicals of the [UWS Laboratory Safety Guidelines](#) for further information.
- 7.4 HS&DG should be segregated from all incompatible substances to prevent risks arising from contact or mixing. Refer to section 13.6 Storage & Handling of Chemicals of the [UWS Laboratory Safety Guidelines](#) for further information.
- 7.4 Keep HS&DG in the work area to minimum quantities.

#### **8. Spill Containment**

- 8.1 Provisions must be made where HS&DG are stored or handled for the containment of potential spills or leaks. Refer to section 13.14 Chemical Spills of the [UWS Laboratory Safety Guidelines](#) for further information.

## **9. Emergency Management**

- 9.1 Appropriate emergency management plans to deal with HS&DG emergencies must be developed and implemented. Refer to section 5 Emergency Management of the [UWS Laboratory Safety Guidelines](#) for further information.
- 9.2 Dangerous occurrences and near misses must be appropriately investigated. Contact the [OHS&IS](#) unit for further information.

## **10. Disposal of Chemical Waste**

- 10.1 Waste management procedures must be developed and implemented by all generators of laboratory waste. Refer to section 16 Disposal of Laboratory Wastes of the [UWS Laboratory Safety Guidelines](#) for further information.

## **11. Induction, training and supervision**

- 11.1 All personnel (staff and students) who handle or may be exposed to HS&DG in the workplace must be provided with appropriate induction, on-going training and supervision. Refer to sections 9 Laboratory Safety Inductions and 13.7 Induction and Training of the [UWS Laboratory Safety Guidelines](#) for further information.

## **12. Speciality Chemicals**

- 12.1 Ensure that procedures are in place to handle and store HS&DG that may require:
- licences, permits or notification (e.g. notifiable/scheduled carcinogens, poisons, scheduled drugs, security-sensitive chemicals (SS) – SS ammonium nitrate)
  - special handling (e.g. peroxide-forming chemicals)
  - health surveillance /air monitoring

## **13. Record Keeping**

- 13.1 The following records must be maintained when using HS&DG in the workplace:
- risk assessments
  - HS&DG register and MSDS
  - scheduled substances registers (e.g. carcinogens, drugs)
  - waste disposal
  - induction and training programs
  - health surveillance /air monitoring results

## **14. Further Information**

- 14.1 The following training is offered by the OHS&IS unit:
- online at <http://www.uws.edu.au/ohs/ohs#4>
  - “The Management of Hazardous Substances and Dangerous Goods” – register through Staff Online
- 14.2 Please contact the [OHS&IS](#) unit if you require further information.