

## Hazardous Substances and Dangerous Goods Procedures

### 1. Preamble

- 1.1 University of Western Sydney acknowledges its responsibility to identify, evaluate and control the risks associated with the handling and storage of hazardous substances and dangerous goods.
- 1.2 To achieve this goal the University will provide and maintain the highest practicable standard of occupational safety and health for its staff, students, contractors, sub-contractors, their employees and visitors.

### 2. Legislation

- 2.1 Regulations under the *NSW Occupational Health and Safety Act 2000*, together with requirements under the *Dangerous Goods Act 1975* place mandatory requirements for the management and control of dangerous goods and hazardous substances in the workplace. These regulations include:
  - (i) *OHS Regulations 2001, Chapter 6*;
  - (ii) *Code of Practice for the Control of Workplace Hazardous Substances*;
  - (iii) *NSW Code of Practice for the Preparation of Material Safety Data Sheets*;  
*and*
  - (iv) *NSW Code of Practice for the Labeling of Workplace Substances*.

### 3. Definitions

- 3.1 **Dangerous Goods:** Substances and items classified as dangerous goods under Section 2 of the *Australian Code for the Transport of Dangerous Goods by Road and Rail*. There are nine categories of Dangerous Goods as detailed in Attachment 1.
- 3.2 **Hazardous Substance:** A substance that has the potential to harm the health of persons. It can be a single chemical entity, or a mixture. Substances are either listed in the "*List of Designated Hazardous Substances*" or fits the criteria for a hazardous substance as per approved criteria for classifying Hazardous Substances, both of which are published by Worksafe Australia.

- 3.3 Material Safety Data Sheet (MSDS):** A document that describes the properties and uses of a substance through identity, chemical and physical properties, health hazard information, and precautions for use and safe handling information.
- 3.4 Register:** Means a readily available listing of all-hazardous substances and MSDS, which are used in the workplace.
- 3.5 Research:** It the systematic investigative or experimental activity conducted for the purpose of:
- (i) Acquiring new knowledge whether or not that knowledge will have a specific practical application; or
  - (ii) Creating new materials, products, devices, processes or services: or
  - (iii) Improving systems.
- 3.6 Risk:** It is the likelihood that a substance will cause harm in the circumstances of its use.

## **4. Aims**

- 4.1** The University has a legal and moral obligation to address occupational health and safety hazards and issues when brought to the attention of the University by staff, students or member of the public, both in the short and long-term health effects arising from the use and storage practices of hazardous substances and dangerous goods in the workplace.
- 4.2** The aim is to provide direction and information on the safe use and storage of hazardous substances to minimise the risks to health due to exposure in the workplace.

## **5. Responsibility**

- 5.1 Management** is responsible for:
- (i) Implementing the University's Hazardous Substance and Dangerous Goods Procedures in their areas of control.
  - (ii) Ensuring annual completion of the Hazardous Substances Register (Attachment 1) and forwarding a copy of the OHS&R Co-ordinator.

- (iii) Ensuring information collected via the Register is not listed as a Hazardous Substance Prohibited for Specified Uses (Attached 2).
- (iv) Ensuring all out of date and/or no longer used hazardous substances are disposed of using approved methods of disposal  
Ref: Material Safety Data Sheet.
- (v) Ensuring all containers are correctly labelled.
- (vi) Ensuring Material Safety Data Sheets (MSDS) issued within the past five years are available for all hazardous substances.
- (vii) Notifying all non-employees (i.e. contractors/sub contractors) that no substances are to be brought onto the University's sites without prior approval.
- (viii) Ensuring appropriate risk control strategies have been developed by non-employees (i.e. contractors/sub contractors) to protect themselves and others who may be present at the workplace.

**5.2 Supervisory Personnel** are responsible for:

- (i) Ensuring documented work practices are developed.
- (ii) Ensuring no employee, student or others are permitted to use any substance unless they have received appropriate training.
- (iii) Monitoring compliance with established procedures.
- (iv) Ensuring employees, students and others have ready access to all relevant documentation (i.e. MSDS, Monitoring Reports etc.) relating to hazardous substances.

**5.3 Employees, Students and Others** are responsible for:

- (i) Complying with established work procedures.
- (ii) Notifying their immediate supervisor of any situation they believe poses a risk of injury or disease to persons exposed to hazardous substances.
- (iii) Co-operating in the assessment and control of hazardous substances.
- (iv) Ensure the appropriate use of Personal Protective Equipment (PPE) is managed and controlled.

## **6. Consultation**

- 6.1 Consultation between employers, employees on the implementation of these procedures is essential, to ensure contents and guidelines are understood by all concerned. General information is to include:

- (i) The identification of hazardous substances.
- (ii) How to control hazardous substances in the workplace.
- (iii) The assessment processes for hazardous substances.
- (iv) Induction and training required.
- (v) The requirements for health surveillance in specific circumstances.

## **7. Procedures**

### **7.1 Purchasing of Hazardous Substances and Dangerous Goods**

It is recommended that prior to the first purchase of a hazardous substance or dangerous good for use within the University, a Material Safety Data Sheet (MSDS) be obtained from the supplier or manufacturer of the substance. This will allow preliminary assessment of the health risks posed by the substance, and suitability for use within the University.

7.1.1. It is mandatory that a Material Safety Data Sheet be provided with all first purchases or deliveries. There is no need to include a MSDS with every delivery, unless the MSDS has revised information. All first purchase orders placed shall include instruction "MSDS to be supplied" and as necessary MSDS should be requested.

### **7.2 Material Safety Data Sheets (MSDS)**

The purpose of MSDS is to provide the information needed to allow the safe handling of hazardous substances used at work. The MSDS for a substance subscribes its identity, relevant health hazard information, precautions for use and safe handling information.

7.2.1. Manufacturers and importers are required under the Regulations to produce MSDS for all hazardous substances. MSDS will be provided in the approved format (as described in the Code of Practice).

7.2.2. It is a legal requirement for MSDS to be updated at least every five years, and whenever new information about the substance becomes available. Do not accept MSDS where the issue date is outside five years.

7.2.3 Copies of manufacturers and importers MSDS's must be readily available to all that are required to use or handle the substance. Access may include paper copies, or computerised MSDS databases (i.e. CHEMWATCH).

MSDS's are to be readily available and onsite at all times. It is the employer's responsibility to ENSURE that:

- (i) Only current MSDS are used.
- (ii) Staff responsible for areas using hazardous substances are trained in how to access the information.
- (iii) Where information is displayed in screen format, there are means of obtaining a paper copy of that information.

### **7.3 Suppliers who refuse to provide MSDS**

Suppliers who refuse to provide an MSDS on request are to be referred to the Occupational Health, Safety and Risk Unit for follow-up action. Alternative suppliers should be considered if the supplier refuses a request for an MSDS. Under the regulations it is a mandatory requirement for suppliers to supply MSDS on or prior to the first occasion that the substance is supplied. There is no need for UWS to request an MSDS on every subsequent deliver unless specifically requested or the MSDS held is outside the five (5) year period.

### **7.4 Inductions and Training**

Induction and training is to be provided to all employees and students whose work potentially exposes them to hazardous substances in the workplace. The induction program is to include:

- (i) Storage and handling of hazardous substances.
- (ii) Labelling of substances and containers.
- (iii) MSDS availability, Information about hazardous substances.
- (iv) Details on the risk assessment processes.
- (v) Work practices and procedures for all stages in the use of hazardous substances and dangerous goods.
- (vi) Control measures.
- (vii) Correct use of personal protective equipment.
- (viii) Emergency procedures.
- (ix) First Aid.
- (x) Details of monitoring and health surveillance.
- (xi) Other details regarding the rights and obligations of employees and students using the substances.

7.4.1 Records of training shall be kept, including the names of those who have received the training, an outline of the course content, and the names of those providing the training. These records are required to be kept for at least five (5) years.

## 7.5 Labelling of Hazardous Substances and Dangerous Goods.

All Hazardous Substances and Dangerous Goods must be correctly labelled in accordance with the Code of Practice for labelling. Labels for containers with the **capacity of 500mL(g) or more** should include the following information:

- (i) Signal word(s) and/or dangerous goods class and subsidiary risk label(s) (where applicable).
- (ii) Identification information including product name, chemical name, UN number, and ingredients and formulation details.
- (iii) Risk phrases.
- (iv) Directions for use (where appropriate).
- (v) Safety phrases.
- (vi) First Aid procedures.
- (vii) Emergency procedures.
- (viii) Details of manufacturer or importer.
- (ix) Expiry date (where relevant).
- (x) Reference to MSDS.

7.5.1 Where the container has a **capacity of less than 500mL(g)** the label should provide the following information. Signal word(s) and/or dangerous goods class and subsidiary risk label(s) (where applicable):

- (i) Chemical name.
- (ii) Risk phrases.
- (iii) Safety Phrases.
- (iv) First Aid procedures.
- (v) Details of manufacturer or importer.
- (vi) Reference to MSDS.

7.5.2 Decanted materials need the following information:

- (i) Chemical name.
- (ii) Risk phrases.
- (iii) Safety phrases.

## 7.6 Test Tubes

For a rack of test tubes containing the same material, a tag attached to the rack is sufficient.

## 7.7 Register and Inventory Requirements

- (i) A register of all Dangerous Goods and Hazardous Substances used in the workplace is to be kept and maintained. A master register is to be held by the Occupational Health, Safety and Risk Unit for WorkCover NSW licensing requirements.
- (ii) The register is to be held by persons in control of the workplace and be readily accessible and made available for inspection and review on a yearly basis.
- (iii) The register of Hazardous Substances is to be reviewed on a yearly basis and details advised to the OHS&R Unit for inclusion and review of the overall master copy of all hazardous substances held and in use on and in University facilities/premises.
- (iv) A register provides a listing of all hazardous substances that are used or produced in the workplace.
- (v) The register can also be used as a tool to manage substances used at work.

7.7.1 The register details are to include:

- (i) Product name or common name.
- (ii) Specific Manufacturers name.
- (iii) UN Number.
- (iv) Dangerous Goods Class.
- (v) Whether an MSDS is held and on file.
- (vi) Normal quantity held.
- (vii) Location of bench level holding and storage location.

## **7.8 General Storage Requirements**

- (i) Storage of Hazardous Substances and Dangerous Goods is to be in accordance with the Dangerous Goods Regulations and relevant statutory requirements.
- (ii) Considerations to be taken into account include quantities to be stored, chemical segregation, and appropriate warning or safety signage etc. Storage areas should be well secured and access limited to authorised persons.
- (iii) All dangerous goods and hazardous substances should be clearly labelled with the identity of their contents and any other information that distinguishes the potential hazard involved i.e. Dangerous Goods Classification etc.
- (iv) Labelling is to be in accordance with the Worksafe guidelines for labelling of hazardous substances (see also labelling of hazardous substances).

- (v) Where possible substances should be stored in Dangerous Goods class to ensure compatibility. If mixed Dangerous Goods Classes exist, strict adherence to compatibility regulations are to apply.

## **7.9 Shelf Storage**

Raised edged shelving is preferable to flat shelving, as the raised edge can help to prevent packages from falling off, and to contain spills. To help minimise breakage and spills, containers should not be stored above shoulder height. In particular, corrosive chemicals or large containers such as Winchesters should be stored as low as possible.

## **7.10 Illumination**

The storage area should be well illuminated and depending on the quantity stored may require spark-proof fittings.

## **7.11 Heat and Lights**

Chemicals should not be stored in direct sunlight or be subjected to any direct heat source.

## **7.12 Minimal Amounts**

Every effort must be made to minimise the quantity of goods to be stored. Minimisation of quantity held to meet requirements has advantages. It can reduce or eliminate hazards such as fire, spillage, and explosion etc. It also reduces the amount of chemicals to be disposed of with resulting cost savings.

## **7.13 Laboratory Storage**

Minimisation is particularly critical where hazardous substances are stored in the laboratory rather than a specialist store. Quantities kept in laboratories should be sufficient for day-to-day use rather than bulk supplies. This is especially critical with substances that are known to deteriorate or become unstable during storage.

7.13.1 The following general rules and guidelines should be observe when storing chemicals in the laboratory:

- (i) Store Dangerous Goods Chemicals Class 3 (flammable liquids) in a flammable liquid cabinet.
- (ii) Store Dangerous Goods Class 8 (corrosive substances) on suitable capture trays in under bench storage or special acid cabinets.

- (iii) Segregate all unstable chemicals and store them in cupboards suitably identified. All containers should be well labelled and clearly marked.
- (iv) Poisons and drugs should be stored according to relevant statutory requirements.
- (v) Do not store flammable liquids in close proximity to heat sources such as Bunsen burner etc.
- (vi) Flammable liquids should always be decanted in a well-ventilated area, away from any ignition source.
- (vii) Ensure containers are compatible with their contents, are in good condition and are identified.
- (viii) The lids of containers are to be kept secure when not in use.
- (ix) Not more than 2.5 litres of flammable liquids should be stored in a fume cupboard at any one time. Refer also Australian Standard 2243.8.

7.13.2 The following safe working procedures are to be adhered to at all times whilst accessing hazardous substance bulk stores. Failure to adhere to these procedures will be considered to be a breach of *Occupational Health and Safety Act, 2000*, associated *Regulations* and UWS safe work procedures.

- (i) Only authorised persons are permitted to access this facility.
- (ii) Appropriate wearing of personal protective equipment is essential (i.e. gloves, safety glasses, aprons, footwear etc.).
- (iii) All receipts and issues of chemicals are to be entered in the log located in the safety bay.
- (iv) Only known chemicals are to be stored in the facility.
- (v) All chemicals are to be clearly labelled with manufacturer's label or appropriate hazardous substance label. Labels are to be in good condition and easily read.
- (vi) All chemicals are to be segregated by class into the appropriate bays.
- (vii) All chemicals are to be stored according to their compatibility's.
- (viii) All chemical containers are to be in good condition and appropriate for contents.
- (ix) Copies of MSDS's are to be held on site and located in the safety bay for use as appropriate. MSDS's must be current.
- (x) Storage of hazardous substances is to be in accordance with current regulations.

- (xi) Decanting of chemicals is only to be undertaken under strict safety precautions. Use of appropriate manual handling aids suitable for decanting is essential.
- (xii) Extreme caution is to be exercised when transporting chemicals to and from this bulk store. Appropriate methods of transportation of chemicals to/from this store is to be exercised at all times. If in doubt, contact your supervisor.
- (xiii) Notification of accident/injury or incidents must be reported immediately.
- (xiv) Spillages of any type are to be reported immediately to your supervisor. Appropriate clean-up action is mandatory.
- (xv) Emergency procedures are to be strictly adhered to.
- (xvi) Keys for access to this store are restricted. Only authorized personnel are to be issued with keys.

#### **7.14 Donated Chemicals**

7.14.1 The acceptance of donated chemicals is only to be considered under strict control measures. The following controls are mandatory:

- (i) Only known substances are to be accepted.
- (ii) All substances to include a copy of the relevant MSDS.
- (iii) Containers of substances are to be in good condition.
- (iv) All substances are to be correctly labeled in accordance with the regulations.
- (v) All substances are to be included on the inventory of hazardous substances.
- (vi) Only accept quantities that will be used.

7.14.2 If in doubt advice can be sought from the Occupational Health Safety and Risk Unit prior to acceptance.

#### **7.15 Waste Disposal and Management**

7.15.1 Waste control measures must be adopted and should be environmentally responsible and comply with requirements of Federal and State legislation and any other regulatory requirements.

7.15.2 The procedures in place should protect the health and safety of persons in all areas in control of hazardous substances and the community in general.

7.15.3 Laboratories and other areas using hazardous substances generate many types of waste according to the work carried out.

7.15.4 Each category (such as chemical or solvent, biological, sharps and radioactive waste) requires segregation and safe working procedures.

7.15.5 Duties of persons in control of workplace that generate hazardous substance waste is responsible for ensuring that:

- (i) Staff are fully aware and adequately trained in waste management procedures.
- (ii) Materials and procedures are in place for containing wastes and cleaning up spills.
- (iii) Waste is kept to a minimum by adopting good work practices and purchasing materials that will reduce waste production.
- (iv) Adequate resources are available for waste management procedures.
- (v) Unwanted or used substances are suitably disposed of or transferred to other areas with higher usage.
- (vi) All relevant licences and permits required by statutory authorities (i.e. EPA etc.) for discharge and disposal of waste are current.
- (vii) Each area maintains a record of waste products.
- (viii) If a specialist contractor is utilised to pick up and dispose of hazardous waste, the selected contractor should:
  - (a) Be fully licensed to transport and dispose of the category of waste by the relevant authority.
  - (b) Supply written confirmation of the final disposal of the hazardous waste.

**7.16 The following general procedures apply.**

**7.16.1 Liquid Waste Storage:** Liquid waste such as solvents or acids are to be stored in containers approved by the statutory authority. The container should be:

- (i) Resistant to the chemical contents.
- (ii) Able to be sealed.
- (iii) Suitable for transport.
- (iv) Not more than 20 litres capacity.

**7.16.2 Solid Waste Storage:** Solid waste and small quantities of hazardous liquid waste should be stored in their original containers prior to disposal.

### **7.16.3 Labelling of Waste Containers**

- (i) Waste containers must be clearly labelled with the:
- (ii) Nature of contents.
- (iii) Date.
- (iv) Name of the person responsible for the waste.
- (v) Quantity disposed of.

**7.16.4 Compatibility:** Only compatible substances should be packed in the same container.

**7.16.5 Segregation:** When storing hazardous waste containers they should be segregated if necessary and stored in accordance with statutory requirements.

**7.16.6 Disposal of Sharps:** When disposing of sharps, safe work practices require the minimum amount of handling. Immediately after use they should be placed in a dedicated, secure container which is clearly labelled for this purpose and which complies with AS 4031. Disposable needles should not be recapped or bent and disposable needle/syringe sets should be discarded as a single unit. Sharps containers should be disposed of by high temperature incineration after they have been filled. They must not be emptied or reused under any circumstances.

**7.16.7 Disposal of Laboratory Glass:** In most laboratories, broken glass is usually contaminated with either chemical or biological products. Containers should be large enough to hold broken glassware and be rigid, impenetrable, and able to be sealed and clearly labelled. Any other labeling should refer to the contamination. Disposal procedures should follow minimum statutory requirements.

**7.16.8 Radioactive Waste:** The Radiation Safety Officer is to ensure that the waste storage and disposal procedures for radioactive waste are understood by all concerned and have the approval of the relevant statutory authority. Procedures should be developed specifically detailing the Radiation and control of waste products. The procedures are to include solid and liquid radioactive waste, unwanted sealed sources.

## **8. Risk Assessments and Control**

- 8.1 Chapter 6 of the *NSW OHS Regulation 2001* requires a “suitable and sufficient assessment” to be made of any work involving potential exposure to any hazardous substance. Any substance determined to be hazardous by the supplier, and any substance listed in the “List of Designated Hazardous Substances” shall be assessed to determine the risk posed by the use of that substance. To comply with the regulation, the assessment must involve the following:
- (i) Identification of the hazardous substance - through label and MSDS.
  - (ii) Review of information about hazardous substance - review of the MSDS. Other sources can be used in addition to the MSDS.
  - (iii) Identification of risks - this will depend on the hazardous substance itself, conditions of use, level of exposure, control measures in place and the nature and severity of potential health effects.
- 8.2 Some assessments are simple and obvious. In this case, the employer is only required to note that the assessment has been undertaken, and the result noted in the register.
- 8.3 Some assessments will need to be more detailed. This will be the case when there is uncertainty about the degree of risk, when there is a known significant risk to health, and where more complex chemical processes and exposures are involved. More detailed assessments may require additional information, monitoring to determine exposure, and investigation of existing control measures.

## **9. Health Monitoring and Surveillance**

- 9.1 Health surveillance is required, by the Regulation, for employees who have been identified in the workplace assessment as having:
- (i) A risk to health from one of the listed hazardous substances (*Attachment 2*).
  - (ii) Exposure to a hazardous substance for which:
    - (a) An identifiable disease or health effect may be related to the exposure;
    - (b) There is reasonable likelihood that the disease or health effect may occur under the particular conditions of work; or

- (c) There are valid techniques for detecting indications of the disease or the effect.

9.2 The employer is responsible for ensuring that health surveillance that has been established as a result of the assessment process is carried out. The employer is responsible to pay for any expenses and ensure that the health records are maintained as a confidential record. The employer is to inform employees and others of the purpose of the health surveillance, and to make acceptable arrangements for employees to participate in the program. Provide appropriate information to the medical practitioner i.e. substance used, copy of MSDS, risk assessment reports etc.. Records of all health surveillance must be co-ordinated and maintained for a period of at least thirty years in accordance with the regulations. Employees also have a responsibility to co-operate with the employer in regards to undertaking health surveillance testing.

## **10. Further Information**

10.1 The following publications may also be of assistance:

- (i) National Occupational Health and Safety Commission, *Approved Criteria for Classifying Hazardous Substances*, Australian Government Publishing Service, Canberra, 1991.
- (ii) National Occupational Health and Safety Commission, *List of Designated Hazardous Substances*, Australian Government Publishing Service, Canberra, 1994.
- (iii) National Occupational Health and Safety Commission, *National Code of Practice for the Labelling of Workplace Substances*, Australian Government Publishing Service, Canberra, 1994.
- (iv) National Occupational Health and Safety Commission, *National Code of Practice for the Preparation of Material Safety Data Sheets*, Australian Government Publishing Service, Canberra, 1994.
- (v) National Occupational Health and Safety Commission, *Guidance Note for the Assessment of Health Risks Arising from the use of*

*Hazardous Substances in the Workplace*, Australian Government Publishing Service, Canberra, 1994.

- (vi) National Occupational Health and Safety Commission, *Exposure Standards for Atmospheric Contaminants in the Occupational Environment*, Australian Government Publishing Service, Canberra, 1995.
- (vii) Australian Standards AS 2243 Parts 1 – 10 Safety in Laboratories.
- (viii) CCH Australia Limited, Laboratory Safety Manual 1992
- (ix) UWS Department of Chemistry Occupation Health and Safety Manual February 1997.

**10.2 Attachment 1**

**10.3 Attachment 2**

**10.4 Attachment 3**

**Hazards Substances Register**  
Attachment (1)

SITE: \_\_\_\_\_ CAMPUS: \_\_\_\_\_

Building Number	School/Department	Room Number	Campus

Depot Number	Type of Depot	Class	Licensed Maximum Storage Capacity

UN No.	Shipping Name	Class	Pkg Group	EPG	Produce or Common Name	Typical quantity	Unit e.g. L, kg. M <sup>2</sup>

**NB:** The above information can be obtained from the MSDS provided by the manufacture and/or supplier of the particular substance.

It should be noted that manufacturers and suppliers of hazardous substances are required by law to provide a MSDS for any hazardous substance that is supplied to another person for use at work.

## Hazardous Substances For Which Health Surveillance Is Required Attachment 2

Column 1 Hazardous Substances	Column 2 Type of Health Surveillance
<b>Acrylonitrile</b>	Occupational and medical history Demographic data Records of personal exposure.
<b>Arsenic (Inorganic)</b>	Demographic, medical and occupational history Exposure record Physical examination with emphasis on the peripheral nervous system and skin Urinary total arsenic.
<b>Asbestos</b>	Occupational and demographic data Medical interview Records of personal exposure.
<b>Cadmium</b>	Exposure record Physical examination with emphasis on the respiratory system Standard respiratory questionnaire to be completed Standard respiratory function tests including for example FEV1 FVC and FEV1/FVC Urinary Cadmium and B2-microglobulin.
<b>Crystalline Silica</b>	Completion of a standardised respiratory questionnaire Standardised respiratory function test, such as FEV1, FVC and FEV1/FVC Chest X-ray, full size PA view.
<b>Isocyanates</b>	Occupational and medical history Completion of a standardised respiratory questionnaire Physical examination of the respiratory system and skin Standardised respiratory function test, such as FEV1, FVC and FEV1/FVC.
<b>Mercury (inorganic)</b>	Demographic, medical and occupational history Physical examination with emphasis on dermatological, gastrointestinal, neurological and renal systems Urinary inorganic mercury.
<b>MOCA (4, 4- Methylenebis 2- Chloroaniline)</b>	Urinary total MOCA. Dipstick analysis of urine for haematuria. Urine cytology.
<b>Organophosphate pesticides</b>	Occupational and medical history. Physical examination. Baseline estimation of red and plasma cholinesterase activity levels by the Ellman or equivalent method. Estimation of red cell and plasma cholinesterase activity towards the end of the working day.
<b>Polycyclic aromatic hydrocarbons</b>	Exposure record, including photochemical skin burns. Demographic, medical and occupational history. Physical examination.
<b>Thallium</b>	Demographic, medical and occupational history. Physical examination. Urinary thallium.
<b>Vinyl Chloride</b>	Occupational and demographic data. Record of personal exposure.

## Categories of Dangerous Goods

### Attachment 3

<b>Class 1 Explosives</b>	Substances and articles used to produce explosions or pyrotechnic effects. These include fireworks and cartridges.
<b>Class 2 Substances Gasses</b>	Gasses, which have been compressed, liquefied or dissolved under pressure. They may be flammable, non-flammable non-toxic, or poisonous.
<b>Class 3 Substances Flammable Liquids</b>	Liquids that can be ignited and will burn. This classification is further broken down according to the flash point of the liquid.
<b>Class 4 Substances Flammable Solids</b>	Solids that are easily ignited and readily combustible, substances liable to spontaneous combustion, and substances, which emit flammable gases when in contact with water.
<b>Class 5 Substances Oxidizing Substances</b>	Oxidizing agents and organic peroxides.
<b>Class 6 substances Poisonous and Infectious Substances</b>	Substances that are capable of causing death or serious injury, harmful to human health or substances that contain viable micro-organisms that may cause disease.
<b>Class 7 Substances Radioactive Substances</b>	Materials or combinations of materials that spontaneously emit ionising radiation.
<b>Class 8 Substances Corrosives</b>	Substances that will damage living tissue, goods or equipment on contact, by chemical action.
<b>Class 9 Substances Miscellaneous Dangerous Goods</b>	Substances and articles which potentially dangerous properties that are relatively minor, or are not covered by any other class.