

LPA Guidelines

Safety Guidelines for the Live Entertainment and Events Industries

Hazardous Chemicals Hazard Guide

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Disclaimer	2
1. Overview	3
2. Key Considerations – Hazardous Chemicals.....	5
3. General Guide – Hazardous Chemicals	6
3.1 Responsibilities	6
3.2 Training and competence	6
3.3 Consultation, co-operation and co-ordination	6
3.4 Design and Planning	7
3.5 Event Delivery.....	7
3.6 Review.....	7
3.7 Documentation and records.....	8
3.7.1 Hazardous chemical register	8
3.7.2 Safety Data Sheet (SDS)	8
3.7.3 General documentation.....	9
4. Suggested Control Measures – Hazardous Chemicals.....	10
4.1 Risk assessment and Safe Work Method Statements (SWMS)	10
4.2 Supply and general use.....	10
4.3 Specific hazards	10
4.3.1 Paints	10
4.3.2 Glues and solvents.....	11
4.3.3 Plastics and foams	11
4.3.4 Timber products and chemicals therein.....	12
4.3.5 Aerosols	12
4.3.6 Gas products.....	13
4.3.7 Organic chemicals and products.....	13
4.4 Labelling and storage.....	13

4.5 Spills and leakages	14
4.6 First aid and emergencies	14
4.7 Health monitoring.....	14
4.8 Touring and transport.....	15
5. Legislation, Standards and Guidance	16

Disclaimer

In legislative terms, the requirements of the *Work Health and Safety Act 2011* (the WHS Act) and Work Health and Safety Regulations (the WHS Regulations) are mandatory. In contrast, a guide is designed to assist obligation holders to comply with the requirements of an act or regulation. The information contained in the LPA guides is not mandatory, has no legal status and may not apply in all work situations.

Obligation holders still have a duty to assess the risks in each work situation and take all reasonable steps to eliminate or minimise the risks that are specific to each work activity.

Hazardous Chemicals Hazard Guide

1. Overview

This guide provides information to assist in managing risks associated with **hazardous chemicals** in live entertainment and events. Information in this guide is based on the *Work Health and Safety Act 2011* (WHS Act) and *Work Health and Safety Regulations 2011* (WHS Regulations), which are operational in all states except Victoria and WA, where adoption of the legislation is not yet enacted (as at Jan 2018).

It is recommended that this information is referenced during the planning and delivery of events to assist in identifying hazards, assessing risks and determining appropriate control measures to eliminate and or minimise these risks, so far as reasonably practicable.

This guide does not replace the need to implement risk management strategies, undertake research or seek specialist advice.

Each worker and person conducting a business or undertaking (PCBU) has a responsibility to understand their obligations under WHS legislation. Codes of Practice and Australian and international standards provide approved guidance on how to meet work health and safety obligations.

Hazardous chemicals are substances, mixtures and articles used that may have an adverse effect on a person's health, safety and the environment. Substances may have one or a combination of flammable, explosive, corrosive or toxic properties. Substances may react when mixed with others to create these or additional hazards. Hazardous chemicals may be generated through work processes, such as toxic fumes from welding or other hot work.

Those at risk might include workers, contractors, visitors or members of the public. Exposure to chemicals hazards may occur by skin contact, inhalation, absorption or ingestion and can occur within and outside the event site.

Consequences of exposure include death, serious injury, respiratory irritation and damage, burns, cancer, poisoning, skin irritation, and eye damage.

Injury may occur as the result of:

- Spills and leakages
- Incorrect storage, handling or disposal
- Contamination
- Exposure to fumes
- Exposure to dust particularly when cutting or shaping materials.
- Explosion or combustion

This Hazardous Chemicals Hazard Guide provides practical information and suggested control measures for:

- Risk assessment and SWMS
- Supply and general use
- Specific hazards
- Paints
- Glues and solvents
- Plastics and foams
- Timber products
- Aerosols
- Gas products
- Organic chemical/products
- Labelling and storage
- Spills and leakages
- First aid and emergencies
- Health monitoring
- Touring and transport

Part 1 of Safety Guidelines for Live Entertainment and Events provides general information on duties, obligations and risk management.

IMPORTANT NOTE – The labelling and Safety Data Sheet (SDS) for Chemicals in Australia is being standardised to international levels. This is the Global Harmonised System (GHS) – See Section 4.4 of this guide.

2. Key Considerations – Hazardous Chemicals

Consider the following questions during event design, planning and delivery	Yes	No	Comments/Action
<i>Will other PCBUs and workers be involved or affected by this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have arrangements been made to consult with and cooperate and coordinate activities with other PCBUs before and during undertaking this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has the scope of work been defined – duration, equipment required, scheduling, location?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there site-specific safety requirements or procedures that must be considered?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have workers been consulted about the hazard, including identifying the hazard, assessing the risk, implementing controls and monitoring that the controls are working?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Can all substances be identified as to whether they are hazardous or not?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Can the substance be eliminated or substituted for a non-hazardous or less hazardous substance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Does the supplier’s label provide information on the hazard, plus instructions and information on the safe storage, handling, use and disposal of the chemical?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has an SDS been acquired?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is the SDS less than 5 years old?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Does the SDS comply with legislation by including information on identity, hazard, storage, disposal and labelling?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Do relevant personnel understand how the substance is used in the workplace/event?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Can hazardous chemicals be generated as a result of activities in the workplace such as grinding, machining, sanding or the mixing of substances?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are necessary emergency facilities and procedures in place in the event of an accident?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is appropriate documentation available for heritage chemicals (up to 10 years old for which no alternative is available)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

3. General Guide – Hazardous Chemicals

3.1 Responsibilities

PCBUs have specific duties under Part 7 of the WHS Regulations to manage the risks to health and safety associated with using, handling, generating and storing hazardous chemicals at a workplace.

The duties include:

- Correct labelling of containers and pipework, using warning placards and outer warning placards and displaying of safety signs
- Maintaining a register and manifest (where relevant) of hazardous chemicals and providing notification to the regulator of manifest quantities identified in Schedule 11 of the WHS Regulations
- Identifying risk of physical or chemical reaction of hazardous chemicals and ensuring the stability of hazardous chemicals
- Ensuring that exposure standards are not exceeded
- Monitoring workers' health
- Providing information, training, instruction and supervision to workers
- Providing required personal protective equipment PPE to workers
- Providing spill containment system for hazardous chemicals and training in its use if necessary
- Obtaining the current Safety Data Sheet (SDS) from the manufacturer, importer or supplier of the chemical
- Controlling ignition sources and accumulation of flammable and combustible substances
- Providing fire protection, firefighting equipment and emergency and safety equipment

The PCBU must also provide any supervision that is necessary for a person to work safely with hazardous chemicals.

Workers must also take reasonable care of their own safety and the safety of others.

3.2 Training and competence

Appropriate induction, training and supervision must be provided for people whose work potentially exposes them to hazardous chemicals, and for those who supervise such work. Personnel must be competent in the safe handling and use of hazardous chemicals, able to understand Safety Data Sheets (SDSs), follow Safe Work Method Statements (SWMSs), be able to contain spills, understand emergency procedures and be able to competently use PPE.

3.3 Consultation, co-operation and co-ordination

The WHS Act makes consultation with workers a legal requirement. Consultation, cooperation and coordination between PCBUs is a requirement where they share a duty for the safety of a worker or for work to be done.

All PCBUs have a duty to consult, co-operate and co-ordinate with all other PCBUs and workers who have a duty in relation to the activity. They should use the information in this guide to consult with workers including event staff to determine the hazardous chemicals hazards and risks and how to best eliminate or minimise these risks using the hierarchy of controls.

Consultation must take place before chemicals are introduced to the workplace and include the assessment and control of hazardous substances. If employees are represented by health and safety representatives, the consultation must involve those representatives.

Designers and suppliers using hazardous chemicals, such as set construction materials or for special effects, have a duty to consult cooperate and coordinate with others in the workplace. This includes providing information on materials used, advice on risk assessment approaches, and participation in the development and implementation of risk assessments, controls and SWMS, and cooperating with implementing risk control measures.

3.4 Design and planning

Plans for the safe storage, handling and disposal of hazardous chemicals should be in place before receiving hazardous chemicals or items incorporating hazardous chemicals in the workplace.

This planning should include:

- Consultation with relevant PCBUs and workers
- Appropriate scheduling and allocation of resources to minimise impact on others
- Development of risk assessments and SWMS including controls agreed to during consultation
- Access to site and logistics including delivery, storage and disposal
- Adherence to legislative requirements such as signage, emergency procedures, appropriate PPE
- Communication and documentation including SDS register
- First aid, emergencies and health monitoring

3.5 Event delivery

In the delivery stages of an event (bump-in, rehearsal, show and bump-out etc.) the following activities should be addressed:

- Consultation with relevant PCBUs and workers
- Site specific inductions and training
- SDS register
- Appropriate PPE and emergency procedures
- Equipment inspection and/or maintenance
- Implementation and monitoring of controls identified in risk assessments or SWMS
- Compliance to legislative requirements
- Review, consultation and adjustment control measures as required on site
- Incident reporting and management
- Hazardous waste management
- Sign-off and handover procedures

3.6 Review

After an event, the following criteria should be reviewed in consultation with relevant parties:

- Incident reports and outcomes including near-misses
- Effectiveness of the control measures
- Areas for improvement
- Occasions of non-compliance
- Any new hazards or risks identified.

3.7 Documentation and records

Specific documentation and records are required under WHS Regulations if hazardous chemicals are in the workplace:

3.7.1 Hazardous chemical register

WHS Regulation 346 requires a Hazardous Chemicals Register to be readily accessible to all persons involved in the use, storage, handling and disposal of hazardous chemicals and to anyone likely to be affected by the chemical in the workplace. The register must be accompanied by the current Safety Data Sheets (SDS).

The Hazardous Chemicals Register must note the quantity of dangerous goods being stored. This is needed to determine whether 'manifest' or 'placard' quantities of dangerous goods are being stored. The manifest must comply with Schedule 12 of the WHS regulations. It contains more detailed information than a register of hazardous chemicals as its primary purpose is to provide information for emergency services. 'Manifest' and 'placard' quantities are defined in Schedule 11 of the WHS Regulations, table 11.1 and included in the **Code of Practice for Managing the Risk of Hazardous Chemicals in the Workplace Appendix D:**

https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_risks_of_hazardous_chemicals2.pdf

Printed copies must be available if workers or contractors are not able to easily access electronic copies.

On temporary sites, fire authorities require information on the location and quantities of flammable goods stored to be available at the location of the Fire Control Panel or Emergency Control Point.

A dangerous goods notification must be provided to the state/territory regulator annually. For further information about dangerous goods reporting, manifest and placard signage requirements refer to the safety regulator in the relevant state/territory.

3.7.2 Safety Data Sheet (SDS)

WHS Regulation 344 requires a PCBU to obtain an SDS when the chemical is first supplied to the workplace. Regulations also require that this be prepared by the manufacturer/importer and supplied by the supplier.

An SDS, previously called a Material Safety Data Sheet (MSDS), is a document that provides information on the properties of substances and how they affect health and safety in the workplace. For example an SDS includes information on:

- Identity of the chemical
- Health and physicochemical hazards
- Flammability properties
- Safe handling and storage procedures
- Emergency procedures
- Disposal considerations

It is important to note that product information sheets or similar are not an equivalent substitute for an SDS. The SDS should always be referred to when assessing risks in the workplace.

An SDS is an important source of information that must be considered when making any decisions on managing risk from hazardous chemicals in the workplace.

SDSs must be provided for all hazardous substances, be located with product and be available to all persons working with or potentially affected by hazardous substances.

SDSs should also be provided for sets and props, including any hazardous materials used in their construction, to enable the adoption of appropriate control measures during their installation, modification and disposal.

3.7.3 General documentation

The following general documents and records should be created, maintained and kept on site when undertaking work with hazardous substances during an event:

- Risk assessments and SWMS
- Any air or other environmental monitoring/health surveillance records
- Inspection and testing records for engineering controls
- Dangerous goods manifests
- Training records, certificates of competency and licences, for a minimum of 5 years
- Induction records, for a minimum of 5 years
- Toolbox talk topics and attendance
- Evidence of consultation
- Incident reports, including near-misses

Any of these documents could be requested to be sighted by other PCBUs for verification or clarification and should be available at all times.

Some WHS documents and records need to be retained for a specific period of time – see relevant WHS legislation for details.

4. Suggested Control Measures – Hazardous Chemicals

4.1 Risk assessment and Safe Work Method Statements (SWMS)

Risk assessment should be undertaken prior to a new hazardous chemical being introduced to the workplace and SWMS prepared if directed by the risk assessment.

Risk assessment must take into account the particular environment in which the hazardous chemical is being used. For example, compounding problems can occur if people working at height, alone, isolated or in confined spaces are exposed to substances that may cause drowsiness or dizziness. Safe Work Australia provides an overview of a risk assessment process for hazardous chemicals and a risk assessment checklist. See **Managing Risks of Hazardous Chemicals in the Workplace Code of Practice** Appendix F and G:

https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_risks_of_hazardous_chemicals2.pdf

4.2 Supply and general use

Hazardous substances must be kept in the smallest practicable quantities. SWMS should be prepared and available to all workers and contractors working with hazardous chemicals and substances. The SWMS should include the SDS, and detail on the safe method of working with and disposal of the chemical.

Hazardous chemicals and substances should only be purchased from suppliers able to provide an appropriate SDS.

Substances must only be used for the purpose intended and following manufacturer/suppliers instructions.

Contractors and workers must be competent in working with the hazardous chemicals.

Appropriate and adequate supervision, training and PPE must be provided to workers, contractors and others such as visitors if necessary for the handling and use of hazardous chemicals and substances.

All personnel must understand the potential for reactions with other chemicals, heat, and ignition sources, and be competent to identify and use appropriate safe work practices.

Workers must wear appropriate PPE (Model WHS Regulation 46).

PPE and engineering controls must be inspected and maintained. For example fume cupboards must be inspected at least annually and placed out of service if they fail the test.

Potential ignition sources must not be introduced to the area where there is a possibility of fire or explosion (Model WHS Regulation 355). This includes smoking only in designated smoking areas

4.3 Specific hazards

4.3.1 Paints

Some paint products are volatile and can be corrosive and/or create toxic fumes. When paint is applied by spray – aerosol or compressed air – airborne particles are released. Controls include:

- Substitute solvent based paints with water based products
- Substitute paints that require mixing with pre-mixed products
- Ensure that areas where paint is used are adequately ventilated
- Use PPE (gloves, masks etc.) as recommended by the manufacturer
- Use paint spraying equipment in an area that has proper extraction and ventilation
- Use aerosol paints as per manufacturers recommendations and in adequately ventilated areas
- Control access to areas where solvent based paint is used
- Do not use solvent based paint where there are potential sources of ignition including lighting instruments, heaters or hot work equipment (welding and grinding). Do not use heat sources to expedite drying of solvent based paint
- Ensure spill, firefighting and first aid procedures and equipment are in place and understood by all personnel
- Store solvent based paint in a 'flammable goods cabinet' that complies with relevant state regulation
- Store only the smallest practicable quantity of solvent based paint – allowable quantities of some substances are prescribed by state dangerous goods legislation

4.3.2 Glues and solvents

Some glues and solvents are volatile and can be corrosive and/or create toxic fumes. Others require heating. When glue is applied by spray – aerosol or compressed air – airborne particles are released. Strong adhesives, such as *Superglue* will adhere to skin. Controls include:

- Only use glues and solvents as per manufacturers' recommendations
- Control access to the area where glues and solvents are being used and stored
- Provide adequate ventilation and extraction
- Dispose of tools, brushes and spreading devices carefully
- Ensure spill, firefighting and first aid procedures and equipment are in place and understood by all personnel
- Ensure hot-glue guns are correctly mounted on a stand when activated but not in use
- Ensure skin is protected against dripping hot glue
- Store solvents and flammable adhesives in a 'flammable goods cabinet' that complies with relevant state regulation
- Store only the smallest practicable quantity of solvents and flammable adhesives. Allowable quantities of some substances are prescribed by state legislation

4.3.3 Plastics and foams

Whilst convenient and easy to use to create decor for events, plastic and foam products can be highly flammable and may create toxic fumes or dust when ignited, cut or shaped. Controls include:

Substitute plastics with less hazardous substances – NOTE: flame -resistant styrene foam is available, however fumes released under heat may remain a risk. Cotton wadding covered in canvas can be a safe alternative.

- Use respiratory devices as recommended by the product manufacturer when cutting or shaping plastics or foams. Different masks are required for different substances so ensure the type of mask is appropriate to the substance in use, for example a particle dust mask may not prevent the inhalation of a toxic gas.
- Use PPE such as goggles, overalls and gloves to prevent contact with eyes and skin

- Store plastics and foams in the smallest practicable quantities away from heat or ignition sources

4.3.4 Timber products and the chemicals therein

There is a common misconception that MDF is bad and other timber products are safe - this is not the case. Sawdust from any timber product may be a risk to health if inhaled, ingested or by skin contact. Note however that the dust from cutting or shaping MDF is particularly fine and therefore remains airborne for longer. Minute fibres are more readily taken into the body.

Sawdust from different species of timber are known to have varying adverse effects to health. Some timber is treated with chemicals against infestation and many products use synthetic bonding agents. Free formaldehydes and other harmful volatile organic compounds slowly exit timber based materials in vapour form over long periods. This occurs in greater volumes from manufactured timber products such as particle board, plywood and medium and high density fibreboard (MDF and HDF). Health risks range from skin, eye and lung irritation, headaches, asthma and dermatitis to various forms of cancer. Adverse health effects are directly related to levels of exposure. Those working with timber frequently are at a higher level of risk than occasional users. Sawdust is highly flammable and can be explosive. Controls include:

- Use active filtered dust extraction systems when cutting or shaping timber products. Use of a domestic vacuum cleaner adjacent to the cutting tool or connected to the dust outlet of a saw or router is a substitute, though less effective than an installed industrial system.
- Ensure any area where timber is cut or stored, especially soon after cutting, is well ventilated so urea formaldehyde gasses cannot accumulate.
- Seal cut edges and splits as soon as practicable after cutting manufactured or treated timber products. Paint creates a better seal than wood sealants and finishing oil.
- Regularly clean up accumulations of sawdust. Damp down sawdust with water to reduce the risk of it becoming airborne whilst cleaning. Do not use percussive tools, such as hammers on nails, which may create sparks, near piles of sawdust.
- Use correct PPE when working with timber products: goggles, dust mask or respirator mask, overalls, gloves. Continue to use a dust mask when removing and laundering dusty overalls or clothing.
- Avoid cutting timber products on stage or in any area where ventilation is likely to be limited and where more people are likely to be exposed.

4.3.5 Aerosols

Can be classified as Class 2.1 Dangerous Good due to the flammable gas. Usually used for lubrication, adhesives, painting or stain removal.

Contents of aerosol cans are under pressure and may be volatile, toxic or corrosive. Hazards include explosion, fire, skin irritation or damage, eye irritation or damage and respiratory irritation or damage.

Controls include:

- Only use aerosols as per manufacturers recommendations
- Control access to the area where aerosols are being used and stored
- Provide adequate ventilation and extraction
- Dispose of empty aerosol containers carefully. Do not incinerate.

- Ensure firefighting and first aid procedures and equipment are in place and understood by all personnel
- Use PPE to prevent inhalation and skin contact of aerosol packaged products
- Do not use or store aerosols near sources of heat or ignition
- Store aerosol packaged products in a 'flammable goods cabinet' that complies with relevant state regulation
- Store only the smallest practicable quantity of aerosol packaged products. Allowable quantities of some substances are prescribed by state legislation

4.3.6 Gas products

Gas products used in events and entertainment include Liquid Petroleum Gas (LPG) for propulsion of plant, Carbon Dioxide (CO₂) for smoke and haze effects, Oxygen and Acetylene gas for metal cutting and welding and compressed air for various uses. Carbon Monoxide (CO) is released when operating internal combustion engines. Use of some of these gasses is heavily regulated due to their explosive and volatile nature. Hazards include explosion, fire, asphyxiation, toxicity, propulsion of objects. Controls include:

- Substitute for less hazardous products – consider an alcohol based gel product for flame effects over LPG, propane or butane for flame effects
- Store gasses according to manufacturers recommendations and legislation
- Do not use or store flammable gasses near sources of heat or ignition
- Only use gas products where ventilation is adequate
- For volatile gasses, such as Acetylene and LPG, fit a gas fuse correctly to the canister
- Do not use petrol or diesel engine vehicles indoors without adequate ventilation
- Tightly close off valves when gas is not in use
- Store and use the smallest practicable quantities. Allowable quantities of some substances are prescribed by state legislation

4.3.7 Organic chemicals and products

These include medicines, Teflon coating, resins, cleaning products, sugars, perfumes or scents, soil, water, gardening items etc. Treat these substances in the same manner as for glues and solvents, provide adequate ventilation, extraction and storage.

4.4 Labelling and storage

There has been substantial change to the regulations for hazardous chemicals resulting from the adoption of national WHS Regulations. From January 2012, a new system of chemical classification and hazard communication on labels and Safety Data Sheets (SDS), based on the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) came into effect. A transition period of 5 years applies. For details for classification, labelling and SDS see Safe Work Australia **Labelling of Workplace Hazardous Chemicals Code of Practice:**

<https://www.safeworkaustralia.gov.au/system/files/documents/1705/mcop-labelling-workplace-hazardous-chemicals-v3.pdf>

The manufacturer or importer of a hazardous chemical must ensure that it is correctly labelled. Also, a supplier must not supply hazardous chemicals to a workplace if the hazardous chemicals are not correctly labelled.

- WHS Regulations 341–343 require all containers of hazardous chemicals must be labelled as per the requirements specified in Labelling of Workplace Hazardous Chemicals Code of Practice. This includes decanted chemicals.
- Always store chemicals in containers recommended by the manufacturer. Some substances will melt glass, others may react to certain types of plastic or metal
- Never pack or decant a hazardous chemical into a container that would usually contain food or beverages or may be mistaken for containing food or beverages
- Affix a label such as 'Unknown Substance. Do not open', to any container whose contents are unknown, isolate it and arrange for collection as soon as possible by a competent waste disposal provider
- Keep storage containers tightly closed to avoid spills and leaks
- Store chemicals so that they do not become unstable as per WHS Regulation 356
- Isolate chemicals from one another according to their potential combination dangers, chemicals stored on shelves should not create hazards through interaction, combination or contamination
- Restrict access to chemicals to those competent in working with hazardous chemicals, often this achieved through a locked cupboard although care must be taken to avoid creating new chemical combination hazards

4.5 Spills and leakages

WHS Regulation 357 requires a spill containment system where there is a risk of a spill in any part of the workplace. It must allow for how to clean up, contain and dispose of the spill or leak. The provision of spill kits and emergency procedures is necessary to effectively manage the risk.

4.6 First aid and emergencies

An effective emergency plan is a general requirement under WHS Regulation 43. WHS Regulations 360 and 362 require that emergency equipment is always available in workplaces that use or store hazardous chemicals. Examples of controls from the Code of Practice include:

- Use an oversized drum to contain a leaking container
- Provide absorbent material suitable for the chemical likely to be spilled
- Use booms, plates and/or flexible sheeting for preventing spillage from entering drains and waterways
- Provide appropriate types of firefighting equipment and ensure personnel are trained and competent in its use
- Provide neutralising agents such as lime and soda ash
- Provide suitable pumps and hoses for removing spilled material
- Provide first aid kits
- Install emergency showers and eye wash stations
- Provide hand tools such as mops, buckets, squeegees and bins
- Provide suitable protective clothing and equipment to protect the safety and health of personnel involved in the clean-up

4.7 Health monitoring

Health monitoring is required under WHS Regulation 368 for certain hazardous substances, or if because of the work undertaken, there is a *significant risk* that a worker will be exposed to a (any) hazardous substance. The type of health monitoring is also regulated. Further detail is contained in the Safe Work Australia publications:

Hazardous Chemical Requiring Health Monitoring:

<https://www.safeworkaustralia.gov.au/system/files/documents/1702/hazardous-chemicals-requiring-health-monitoring.pdf>

Managing Risks of Hazardous Chemicals in the Workplace Code of Practice:

https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_risks_of_hazardous_chemicals2.pdf

4.8 Touring and transport

When hazardous substances are transported throughout Australia for the use on a touring production, touring companies must carry a register of hazardous substances and relevant SDSs with them. The touring production manager must provide both the register and SDSs to the venue.

The risk associated with these substances must be re-assessed in each venue, as the environmental conditions may vary, thereby altering the potential exposure. Appropriate storage must also be reconsidered.

State and territory laws govern the transport of dangerous goods under the [Australian Code for the Transport of Dangerous Goods by Road and Rail \(ADG7 Code\)](#). PCBUs, workers and contractors must be aware of the requirements for transport. These are substances, mixtures or articles that, because of their physical, chemical (physicochemical) or acute toxicity properties, present an immediate hazard to people, property or the environment. Types of substances classified as dangerous goods include explosives, flammable liquids and gases, corrosives, chemically reactive or acutely (highly) toxic substances.

Check with the relevant legislation, guidance or standard for specific information regarding transporting dangerous goods or hazardous substances applicable to the event.

5. Legislation, Standards and Guidance

Safe Work Australia (2012). *Managing the Risk of Hazardous Chemicals in the Workplace Code of Practice*

https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_risks_of_hazardous_chemicals2.pdf

https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_risks_of_hazardous_chemicals2.pdf

Safe Work Australia (2008) *Model Code of Practice – Labelling of Workplace Hazardous Chemicals*

Approved Criteria for Classifying Hazardous Substances 3rd Edition (NOHSC :1008 [2008]) (Cth)

Department of Infrastructure and Regional Development (2010). *Australian Code for the Transport of Dangerous Goods by Road or Rail, 7th Edition (ADG Code 7.3)* www.ntc.gov.au

Safe Work Australia. National Model Regulations For The Control Of Scheduled Carcinogenic Substances (NOHSC:1011 [1995])

AS 1678 – Emergency Procedure Guide – Transport Series

AS 1940 – The storage and handling of flammable and combustible liquids

AS 2030 – Gas cylinders

AS 2187 – Explosives

AS 2278 – Aerosol containers

AS 2714 – The storage and handling of organic peroxides

AS 2906 – Fuel containers – Portable – plastic and metal

AS 3780 – The storage and handling of corrosive substances

AS 3833 – The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers

AS 4326 – The storage and handling of oxidizing agents

AS 4332 – The storage and handling of gases in cylinders

AS 4452 – The storage and handling of toxic substances

AS 4681 – The storage and handling of Class 9 (miscellaneous) dangerous goods articles

AS 4867 – Cigarette Lighters Series

HB 76 Dangerous Goods – Initial Emergency Response Guide

SAI Global (2014, May 8). *Guide to Standards – Dangerous Goods*.

<http://infostore.saiglobal.com/store/getpage.aspx?path=/publishing/shop/productguides/dangerous.htm>

Sources:

Work Safe Australia (2012). Work Health and Safety Information: Hazardous Chemicals

<http://www.safeworkaustralia.gov.au/sites/swa/whs-information/hazardous-chemicals/pages/hazardous-chemicals-other-substances>

Safe Work Australia (2012). Work Health and Safety Information: Hazardous Substances and Dangerous Goods

<http://www.safeworkaustralia.gov.au/sites/swa/whs-information/hazardous-chemicals/dangerous-goods/pages/hazardous-substances>

Safe Work Australia (2012). Hazardous Chemicals Register Factsheet

https://www.safeworkaustralia.gov.au/system/files/documents/1702/hazardous_chemical_register_factsheet.pdf

Worksafe Victoria (2012). Chemical Safety Assessment Tool

https://www.worksafe.vic.gov.au/_data/assets/pdf_file/0017/211733/ISBN-Chemical-safety-assessment-tool-2017-06.pdf

Managing Chemicals in the Workplace

https://www.worksafe.vic.gov.au/_data/assets/pdf_file/0005/211748/ISBN-Managing-chemicals-in-the-workplace-guide-2017-06.pdf