Procedure: Painting management

Purpose
This procedure describes the processes for managing health and safety risks associated with painting activities conducted at the Australian National University (University). This procedure ensures the legal and other obligations of the Work Health and Safety Act, 2011 (Cth) (WHS Act), the Work Health and Safety Regulations, 2011 (Cth) (WHS Regulations) and the Safety, Rehabilitation and Compensation Act, 1988 (SRC Act) are defined for managing the health and safety of workers at the university. This procedure addresses the requirements of the Safe Work Australia Code of Practice “Spray Painting and Powder Coating”, is linked to the Australian National University’s Workplace Health and Safety Policy, and is one of the WHS Management System Procedures located on the Work Environment Group web page.

Definitions

Competent person means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.

Hazardous Area / Hazardous Zone is an area in which an explosive atmosphere is present, or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of potential ignition sources. This is in fact a three dimensional space.

Local area refers to a College, Research School or Services area of the University.

Paint is a combination of ingredients which may include:

- Solvents (flammable or non-flammable);
- Pigments (ie. colouring agents);
- Resins;
- Hardeners or catalysts; and
- Other additives such as anti-mould, anti-fowling agents (marine paints).

Powder coating is a process by which electrostatically charged powder is applied onto an earthed object.
Solvent is a liquid into which something is dissolved or mixed. In painting the use of the term 'solvent' usually indicates an organic solvent - consisting of hydrocarbons, ethers, or alcohols. The solvent is usually the vapour that can be smelt.

Spray painting is the process in which a liquid coating substance, such as paint or lacquers is converted into a mist or aerosol which are directed onto a surface to produce an evenly distributed film of the required thickness and texture.

Spray painting booth is a room or enclosure designed and dedicated solely for the purpose of conducting all operations associated with spray painting.

Spray painting process, spray painting may be achieved by any combination of the following processes:

- airless spraying - whereby the paint is ejected from a spray nozzle under hydraulic pressure;
- compressed air - whereby a mixture of air and paint is applied under pressure;
- electrostatic - whereby an object and paint are electrically charged at opposite polarities; or
- pressure pack - the use of small spray can paints.

Procedure

Emergency information

1. Direct emergency enquiries to local area management, then Work Environment Group, HR Division (02) 6125 2193 or Extension 52193. The local area is responsible for coordinating any Emergency Services response.

2. After-hours, contact ANU Security (02) 6125 2249 or Extension 52249.

Introduction

3. This procedure specifies the minimum requirements to be undertaken when painting; spray-painting; or applying two-pack paints and coatings.

4. It is expected that these procedures will be followed while working in all of the University's spray paint booths, paint workshops, and buildings.

5. The implementation of painting tenders and contracts at the University, and painting activities being carried out by contract labour, requires all staff including contractors to follow these guidelines. This document details the procedures which are designed to protect the safety and health of painters and minimise the impact on the University
community and the environment. A copy of this document shall be given to and read by all persons involved in painting activities around the University.

6. This document and relevant Safety Data Sheets (SDS) for the products used, are an integral aspect of painting procedures at the University. As such, a copy of the SDS's and this document shall be kept in close proximity to a spray booth or spray painting activity ensuring that they are easily and readily available to all interested persons.

7. It is expected that any new spray paint booth, or modification to an existing spray booth, will comply with the requirements of Australian Standard AS 4114 (current at the time of procurement). See: Alterations in or about University buildings procedure.

8. It is expected that all spray painting be conducted within a spray booth. The role of the spray booth is to:
   - carry away any over-spray;
   - reduce the concentration of flammable vapour in the air below the explosive limits; and
   - reduce the health hazards in the workplace air below the safe exposure levels.

9. Fixed items which cannot be positioned in a spray booth, should be painted by other means (eg, paint brush or paint roller). Authorisation for the conduct of spray painting outside a booth, may occur on location, only after all relevant health, safety and environmental considerations have been taken into account, and where there are means to reduce the spray painting impact to acceptable levels. Spray painting may only be conducted by those persons familiar with the procedures of spray painting and the risk management processes outlined in this document.

10. The application of two-pack paints (eg, polyurethane, epoxy), may only be conducted by painters who are fully aware of the health hazards and properties of the paint, and have the appropriate personal protective equipment (PPE) and training. Unauthorised persons are not allowed within a spray booth while spraying is in progress or while the items are drying. The use of two-pack paints outside a spray booth is not allowed. If such a situation arises the Work Environment Group needs to be consulted immediately.

Responsibilities

11. The person with management control of the local area is responsible for:
   - ensuring a risk assessment process/system is implemented for the storage and handling of all paints including associated chemicals;
• providing, and maintaining appropriate facilities and resources to ensure a safe and healthy work environment;

• providing the necessary resources to access information on chemicals (see: Chemwatch for Safety Data Sheets);

• providing the necessary resources to maintain regulatory registers and records (see: Chemwatch);

• providing the necessary resources to manage and dispose of chemical wastes in an approved manner (see: Chemical Management procedure); and

• ensuring a departure process is implemented including transferring chemical material responsibility and ownership;

12. The person responsible for the local area, or their delegated representative, is responsible for:

• undertaking a risk assessment for the storage and handling of paints and associated chemicals;

• managing, documenting and addressing the risks associated with chemical substances. When the residual risks are considered unacceptable the work shall not be undertaken (see: Chemwatch);

• providing clear and consistent supervision, instruction and training (see: Chemical safety courses);

• maintaining registers and records (see: Chemwatch);

• ensuring that (at least) annual inspections are conducted to check the integrity of the materials and labels and to update the chemical register;

• ensuring chemical material responsibility is transferred upon the responsible person departing the University;

• managing and disposing of paint waste and associated chemical wastes in an approved manner;

• reporting incidents in the agreed manner (see: Reporting incidents);

• Inspection and maintenance of spray booths; and

• Consulting and communicating painting issues with relevant personnel.

13. Painters are responsible for:

• Adhering and contributing to safe operating procedures and guidelines to ensure not only their safety, but also that of fellow staff, students, contractors and visitors, and the environment.
- Assisting and participating in maintaining relevant documentation, risk management and chemical management systems (see: Chemwatch);
- Working in a well-ventilated area. The use of mechanical ventilation should be used to supplement removal of contaminants;
- Using facilities and resources in an appropriate manner to ensure a safe and healthy work environment;
- Using and maintaining personal protective equipment in the appropriate manner, as required (see: University's procedure on Personal Protective Equipment and Clothing);
- Inspecting and maintaining spray equipment, and painting equipment;
- Reporting of issues outside their expertise;
- Disposal of paint waste in an approved manner;
- Conducting (at least annual) inspections to check the integrity of the materials and labels and to update the chemical register (see: Chemwatch);
- Participating in the University's health surveillance program in accordance with the University's health surveillance policy and procedure, where relevant (see: University's health surveillance program - procedure); and
- Reporting incidents in the agreed manner (see: Reporting incidents).

Health and safety background

14. During the process of painting, persons may be exposed to a variety of substances, which may have implications to their safety and health. For example, solvents and paints are formulated with a variety of ingredients. However, exposure and absorption of these substances can occur via:
   - Inhalation;
   - Skin absorption; and
   - Ingestion.

15. Once within the body, the resulting dose in the body can exert an effect on various tissues and organs. This effect may be short term (acute effect), such as dizziness, or from repeated exposure (chronic effects), such as liver damage. The effect on health of various products can be found in their SDS, and these should be consulted by every painter before they use the product for the first time. If unsure about the products effects or for a clarification of the information please contact your supervisor or the Work Environment Group.
16. In general the risk to health from various paint products varies from least to greatest, as follows:

- Water colours, although they may contain toxic pigments;
- Acrylic paints, contain only small amounts of organic solvents;
- Oil based paints and lacquers, contain significant amounts of organic solvents. The solvents can be responsible for dizziness, headaches, nausea, tiredness, irritating cough, red and stinging eyes. Solvents will also de-fat the skin possibly leading to dermatitis;
- Two pack acrylic and some epoxy paints. Consult the relevant SDS; and
- Two pack polyurethane paints, which contain isocyanates (in the hardener) and organic solvents. The isocyanates are potential sensitising agents which may cause asthma.

**Personal Protective Equipment (PPE)**

17. It is management’s responsibility to provide the appropriate Personal Protective Equipment (PPE).

**Note:** PPE should be personal issue, to reduce the health and safety risks associated with the spread of diseases, and encourage care and maintenance and the equipment (see: Personal Protective Equipment and Clothing).

18. It is the responsibility of the owner/user of the PPE to maintain it in a good working condition.

19. The following describe the minimum level of PPE required for personal safety while handling paints and spray painting. Actions and precautions should be based on the risks assessed and follow the hierarchy of controls methodology.

**PPE for applying paint with a brush or roller**

20. The minimum PPE whilst applying paint with a brush or roller are:

- coveralls or overalls;
- gloves (in some circumstances barrier cream may be used);
- appropriate footwear;
- a hat (when painting outside or to keep paint droplets out of one’s hair); and
- safety glasses when painting over head.
21. When paint is mixed, transferred or there is a risk of splashing safety glasses or goggles must be worn. Mixing paint for application by brush or roller must be done in a well-ventilated area.

22. The cleaning of equipment must be carried out in a well-ventilated area. Gloves must be worn when solvent is used.

PPE for Spray Painting

Respirators

23. A full-face positive pressure airline respirator. This design is suitable for use in the application of all paint commonly applied at the University. This type of respirator must be used when handling two pack paints containing isocyanates. This form of respirator also includes in-built eye protection.

24. However, for the application of less hazardous paints (eg. acrylic based paint) a half-face respirator with spray paint canisters (type: A1 P2 with pre-filter) may be used. Eye protection (eg safety glasses or goggles) is then required.

Note: In spray booths where an airline respirator is available, it should be used.

Gloves

25. Solvent resistant gloves made of nitrile or PVC must be worn when handling paint, solvents and during spraying. Rubber gloves are not suitable. Disposable nitrile gloves are acceptable while spraying. Re-useable gloves should be checked before use for leakage and contamination (inside) the glove, and replaced as necessary.

26. To check for cuts and holes, simply grab and pull the cuff of the glove with both hands, flip the glove end over end two or three times to produce a good seal, then grab the cuff with one hand sealing the air within. Squeeze the glove with the other hand (the fingers should inflate), look for holes.

Overalls/coveralls

27. Protective clothing should be worn to avoid contamination of street clothes. Tradesmen’s overalls with sleeves or disposable coveralls are suitable. Cotton or anti-static fabrics are preferred.
Hearing protection

28. Where noise levels are in excess of the 80 dB(A) occupational exposure limit, hearing protection (ear muffs or ear plugs) should be worn. They may also be worn simply to reduce the noise to a comfortable level.

29. When the noise level exceeds 85 dB(A), the noise level of the booth should be documented and placed near the booth with a hearing conservation warning sign.

Footwear

30. Good footwear should have a non-slip chemical resistant sole and protective upper.

Maintenance

31. For personal protective equipment to function correctly and last a reasonable length of time, it must be correctly maintained. The following protocol applies:

Table 1: PPE Protocol

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Appropriate training shall be given before any equipment is used for the first time.</td>
</tr>
<tr>
<td>2</td>
<td>Check before use, to ensure the equipment is not damaged, leaking, and working correctly.</td>
</tr>
<tr>
<td>3</td>
<td>Correctly wear and use the PPE. Contact the Work Environment Group or manufacturer's supplier if unsure.</td>
</tr>
<tr>
<td>4</td>
<td>Store correctly. For example, half face respirators should be stored in a sealed container to prevent absorption of contaminants.</td>
</tr>
<tr>
<td>5</td>
<td>Change respirator filters when appropriate e.g. breathing resistance increases or odours are detected. For isocyanates - change at least every 4-8hrs of use.</td>
</tr>
</tbody>
</table>
Brush / roller painting

32. Some points to note regarding brush and roller application.

- It is recommended that brushes soaking in solvent (eg. mineral turps) be placed into containers with lids, such that the evaporation and inhalation of solvent is minimised.

- Solvent soaked rags should be stored in a well-ventilated area or a flash proof garbage bin. They should not be allowed to accumulate, as this is known to start fires.

- When painting small items with a highly volatile paint, consider using the spray booth.

- Use of personal protective equipment as indicated above.

Note: The use of volatile paints should not be undertaken within 15 m of 'hot work' (welding, grinding, naked flames, ignition sources). A fire extinguisher should be within close proximity.

Operation of spray paint booths and spray painting procedures

33. The following tables indicate step by step procedures for spray painting.

Table 2: Pre-spray procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Pre-spray procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanding</td>
<td>Sanding in a spray booth should only be conducted with the exhaust fan running. A respirator should also be worn. An appropriate air gun may be used to remove dust from the work piece.</td>
</tr>
<tr>
<td>Cleaning</td>
<td>For a good paint finish, a spray booth should be relatively free of dust. Cleaning the booth before spraying can be done by:</td>
</tr>
<tr>
<td></td>
<td>• vacuuming</td>
</tr>
<tr>
<td></td>
<td>• dry sweeping</td>
</tr>
<tr>
<td></td>
<td>• washing with water (if the area is so designed).</td>
</tr>
<tr>
<td>Cleaning Frequency</td>
<td>Depending on the frequency of use and amount of dust, possible cleaning frequencies include:</td>
</tr>
</tbody>
</table>
• before spraying
• after spraying (and drying)
• once a week.

34. The following checks are to be conducted before each use of the spray booth.

Table 3: Equipment checks and operation

<table>
<thead>
<tr>
<th>Step</th>
<th>Equipment checks and operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure that the air inlet filters are clean and free from obstructions.</td>
</tr>
<tr>
<td>2</td>
<td>Ensure all sources of ignition and miscellaneous items are removed from the booth.</td>
</tr>
<tr>
<td>3</td>
<td>Turn on the exhaust fan. Where more than one fan is present all fans must be operating.</td>
</tr>
</tbody>
</table>
| 4    | Turn on the inlet air fan (if present)  
Note: The exhaust fan must run for a minimum of 2 minutes, before spraying can commence. This is known as the pre-spray purge cycle. During this time check:  
The air flow sensor (if present) to ensure that the minimum air flow (0.3-0.5 m/s) is obtained  
Where an air flow sensor is not available, use your ungloved hand or a tissue to determine that the air is flowing efficiently  
Ensure that the filter wall is complete and operational.  
Note: If the air flow is insufficient or significantly decreases or stops, all work
spraying in booth is to stop until the problem is rectified. |
| 5    | Check the compressed air supply - drain any water condensate from the system, ensure the pressure is satisfactory for the operation of the spray gun and respirator. |
Place "Spray Painting in Progress - Do Not Enter" sign on the entrance.

35. Protective clothing – Overalls/coveralls and Paint Mixing.

Table 4: Personal Protective Equipment & Paint Mixing

<table>
<thead>
<tr>
<th>Step</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Air-line respirator, and plug into the air supply. Check the quality of the compressed air (by smell). An oil or burnt smell indicates problems with the compressor. Do not breathe poor quality air.</td>
</tr>
<tr>
<td>2</td>
<td>Chemical resistant gloves and other items specified above.</td>
</tr>
</tbody>
</table>

Paint Mixing

<table>
<thead>
<tr>
<th>Step</th>
<th>Paint Mixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Aim to make only the minimum quantity of paint necessary to reduce wastage. This should be enough for half a days' spraying or a maximum of 4 litres.</td>
</tr>
<tr>
<td>4</td>
<td>Dilute the paint with a suitable solvent into a metal can. If transferring large quantities of solvent from a drum, ensure that the drum is earthed to avoid the risk of a static spark.</td>
</tr>
</tbody>
</table>

36. Positioning of object to be painted, spray gun preparation, spraying and drying.

Table 5: Object position, spray gun, spraying and drying

<table>
<thead>
<tr>
<th>Step</th>
<th>Object position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Be aware of manual handling issues and follow the appropriate guidelines. Larger and awkward items may require two or more people to manoeuvre.</td>
</tr>
<tr>
<td>2</td>
<td>Position the object to be painted within the spray booth with roughly the same amount of space on each side.</td>
</tr>
</tbody>
</table>
### Procedure: Painting management

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Where possible use tables, or trolleys, to raise the working height of small items.</td>
</tr>
<tr>
<td>11</td>
<td>When racks or shelves are used for drying, these should not impede the circulation of</td>
</tr>
<tr>
<td></td>
<td>fresh air, exhaust of contaminated air, or the exit by persons.</td>
</tr>
</tbody>
</table>

#### Spray gun

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Strain paint into the spray gun pot.</td>
</tr>
<tr>
<td>6</td>
<td>Set spray gun parameters for spraying.</td>
</tr>
<tr>
<td>7</td>
<td>Connect gun to air supply.</td>
</tr>
</tbody>
</table>

#### Spraying

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>The ideal operator position while spraying is side-on or facing the work. Never position</td>
</tr>
<tr>
<td></td>
<td>yourself between the work and filters, as you will be covered in paint.</td>
</tr>
<tr>
<td>9</td>
<td>Spray the underside of objects first, by turning the object upside down. Once done,</td>
</tr>
<tr>
<td></td>
<td>then turn object the right way up. Avoid spraying in an upward direction, as this directs</td>
</tr>
<tr>
<td></td>
<td>spray into your breathing zone and face.</td>
</tr>
<tr>
<td>10</td>
<td>Once finished disconnect the spray gun.</td>
</tr>
</tbody>
</table>

#### Drying

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>A better finish is obtained if the objects are allowed to dry within the spray booth.</td>
</tr>
<tr>
<td></td>
<td>Where space is restricted, objects may be moved within the spray booth room. Objects</td>
</tr>
<tr>
<td></td>
<td>may only leave the spray room once the paint is touch dry, set, or cured.</td>
</tr>
<tr>
<td>12</td>
<td>The booth must remain on for a post-spray cycle of at least 5 minutes. However, where</td>
</tr>
<tr>
<td></td>
<td>possible the booth exhaust should run as long as practical, or until the items are</td>
</tr>
<tr>
<td></td>
<td>touch dry.</td>
</tr>
</tbody>
</table>
13. Replace the "spray painting in progress" sign with the "Paint Drying - Do Not Enter" sign.

Note: The only forms of heating allowed in a spray booth are indirect-fired heating systems, reverse cycle air-conditioning, and heat lamps. All equipment needs to be intrinsically safe to reduce the risk of fire\explosion.

37. Clean all equipment and return equipment to appropriate locations.

Table 6: Cleaning and Equipment restore

<table>
<thead>
<tr>
<th>Step</th>
<th>Cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spray gun, with a suitable solvent according to the manufacturer's instruction</td>
</tr>
<tr>
<td>2</td>
<td>Waste paint\solvent should be disposed of via the appropriate means - waste contractor for solvent (oil) based paints, mixed two pack paints may be allowed to harden then disposed of as solid rubbish.</td>
</tr>
<tr>
<td>3</td>
<td>Once work with the solvents and paint is finished. Remove respirator and clean. Once dry place in a suitable location free of dust.</td>
</tr>
<tr>
<td>4</td>
<td>Wipe gloves to remove excess wet paint. Hang out to dry. Your gloves should periodically be washed inside with soap and water and dried. If leaking get a new pair. Disposable types should be thrown out once damaged or excessively contaminated.</td>
</tr>
<tr>
<td></td>
<td>Overalls or coveralls should be allowed to dry. Cotton types should be regularly laundered.</td>
</tr>
<tr>
<td><strong>Equipment restore</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Return equipment, personal protective equipment, paint cans and solvent to their appropriate locations.</td>
</tr>
</tbody>
</table>
Important: Notify management of any problems or malfunctions so that they may be repaired or replaced.

Note: Spray painting using pressure pack (aerosol) cans of paint may be undertaken in a spray booth.

Two pack paint systems

38. Two pack paint includes various types of polyurethane, epoxy and acrylic systems, involving a base (part A) and a hardener or catalyst (part B).

39. Two pack paint systems may only be applied by those persons authorised by management, and have the appropriate knowledge and training.

40. Two pack paint spraying may only occur within a spray booth. Outside a spray booth it should only be applied by brush or roller. It's use within laboratories and other harsh environments may only occur after consideration has been given to -

- Whether substitution with a safer product is not possible.
- Restricting air movement into occupied areas of a building. Ventilation ducts and air-conditioning vents should be blocked off. A mechanical means (i.e. fan) should be available to exhaust contaminated air outside the building with safety. Adequate make-up air should also be considered.

41. In addition to the requirements of the section on Personal Protective Equipment and Spray Paint Booth Operation, the following apply -

- Full protective clothing should be worn, such as disposable coveralls and gloves. Any remaining exposed skin should be coated with barrier cream, as these paints stick very well.
- An airline respirator is required for applying (spraying) two pack polyurethane. If an airline respirator is not available when applying two pack epoxy or acrylics, a full-face air supply respirator (i.e. battery operated filter unit) fitted with organic vapour cartridges (type A class 2, or type AX or A + K, class 2) with a pre-filter, may be used for short periods. However, the filter-type of respirator is not suitable for paints containing isocyanates. A full piece (which also provides eye protection) is required to prevent absorption of mists, and vapours through the eye and irritating of the eyes.
- Nitrile gloves must be worn or other as recommended by SDS and/or manufacturer.

Note: Isocyanate containing paints cannot be applied outside a spray booth.
**Note:** For longer periods, filters may need to be changed regularly or upon breakthrough - ie. when you can smell the solvent.

**Inspection and maintenance of spray booths**

42. In accordance with the Australian Standard recommendations on spray paint booths the following inspection and maintenance program is required for those booths suitable for the use of compressed air spray guns.

**Inspections**

43. In addition to the brief visual inspection conducted before each days spray painting - Three monthly checks

44. In addition to the before spraying checks, a visual inspection should be conducted every three months (irrespective of booth use):

Table 7: Inspection steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure that the air flow through the booth is adequate and evenly distributed</td>
</tr>
<tr>
<td>2</td>
<td>The air quality of the compressed breathing air is not contaminated.</td>
</tr>
</tbody>
</table>

**Twelve monthly checks**

45. Visual and close inspection should be conducted. These periodic inspections include:

Table 8: Twelve monthly check steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Look for loose bolts, hoses etc</td>
</tr>
<tr>
<td>2</td>
<td>Damage to filter mounts, lights, air hoses</td>
</tr>
</tbody>
</table>
Three yearly checks

46. A detailed inspection involving the following:

Table 9: Three yearly check steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>De-energising electrical equipment see: <a href="#">Isolation and Danger Tagging procedure</a></td>
</tr>
<tr>
<td>2</td>
<td>A close look (with tools) and opening access panels, equipment boxes etc, encompassing all equipment, systems, installation, manufacturer's guidelines.</td>
</tr>
<tr>
<td>3</td>
<td>Include earth bondage straps, and fan blades, cleaning of motors to prevent over heating.</td>
</tr>
</tbody>
</table>

47. The Australian Standard Inspection Schedule is included in AS/NZS4114.1:2003. Electrical equipment should be tested as per the ANU's Electrical Safety procedures and relevant codes of practice.

See: [Electrical Safety Management Procedure](#)

48. Maintenance to be conducted only by those conversant with spray booths and associated equipment and who understand approval and certification constraints. A detailed inspection is required after maintenance.

49. Modifications and repairs must meet all Australian Standard requirements.

Records

50. Inspection and maintenance records must be kept. It is recommended that a book (or the form attached) be used to detail information about:

- visual, close and detailed inspections
- change of filters
- any maintenance

See: Inspection and maintenance record form.
Storage of paints / solvents

51. Paints may be stored in the following manner -
   - Unopened new paint cans may be stored on shelves. Keep stock to a minimum.
   - The number of active, half used paints should be kept to a minimum. They shall be stored with the lid firmly secure.
   - All two pack paints are to be kept in a secure location, with limited access. ie. a locked cupboard.
   - Highly flammable paints (of packaging group I) should be stored in a flammable liquids cabinet.

52. Solvent storage shall be kept below 100 L. Solvent drums should be kept in a flammable liquids cupboard. Safety Data Sheets for all hazardous substances should be accessible.

See: Chemwatch

53. A hazardous substance register (list of chemicals and their controls) or the ANU chemical inventory system needs to be used in the workshop, along with the SDSs.

See: Chemwatch

Disposal of paints / solvents

54. Disposal of paints and solvents should be via a Waste Contractor, with the exception that:
   - Acrylic paints may be allowed to dry\harden. The solid waste can then be disposed of in normal rubbish.
   - Mixed two pack paints can be allowed to harden and then disposed of in normal rubbish.

55. (Acrylic) Paint and brushroller washings are not allowed to enter the sewage system, without a special trade waste disposal permit. No material is allowed in the stormwater systems.

See: Chemical management procedure

Health surveillance

56. Health surveillance is available for workers who use isocyanate containing paints. This is undertaken by a medical practitioner.

See: Health monitoring procedure
Note: Persons with a history of isocyanate induced asthma are excluded from work involving isocyanate paints.

First aid

57. All painters should be aware of the first aid procedures for treating likely accidents. First aid advice can be found in the relevant SDS. In general, the first aid advice for -

- **INHALATION** - is move the victim into fresh air. Seek medical attention. Care should be taken when large amounts of vapours have been inhaled - as pulmonary oedema (fluid in the lungs - indicated by a cough some time after the exposure) may occur. Pulmonary oedema may require hospitalisation.

- **SKIN ABSORPTION** - wash with plenty of water. Also see cleaning paint from the skin below.

- **INGESTION** - Do not induce vomiting. Give plenty of milk or water. Seek medical attention.

See: First Aid Procedure

Cleaning paint from the skin

58. In an ideal situation, paint would not contaminate the skin, due to protective clothing and gloves. Barrier cream may also assist in protecting the skin from paint, and making the skin easier to clean.

59. Mineral turpentine, Shellite, White spirit, lacquer thinner and other solvents ARE NOT TO BE USED to clean skin. They are absorbed through the skin, de-fat the skin (causing dryness), and may lead to dermatitis. They may also be responsible for transferring other toxins through the skin. Commercial skin cleaners should be used to remove paint.

60. To help prevent skin dryness and dermatitis it is recommended that a skin repair cream be used regularly.

Incident reporting

61. Reporting incidents, accidents, significant exposures and dangerous occurrences helps the University community avoiding repeated incidents. All incidents at the university must be reported via the University's on-line Figtree system.
Training obligations/courses

61. Work Environment Group runs regular chemical safety courses. Some local OHS Committees have made these courses compulsorily for new chemical users. Local induction must cover chemical safety and management requirements.

See: Chemical safety courses and Work Environment Group.

Sources

Table 10: Legal and other sources of information

<table>
<thead>
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<th>Sources of information</th>
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<td>HS Unit, Audit of Painting and Spray Painting, R. Schmid, 1998</td>
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