Spray Painting Airless Booths

Business Name:	ABN:	
Business Address:		
Contact Person:	Phone:	Email:

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

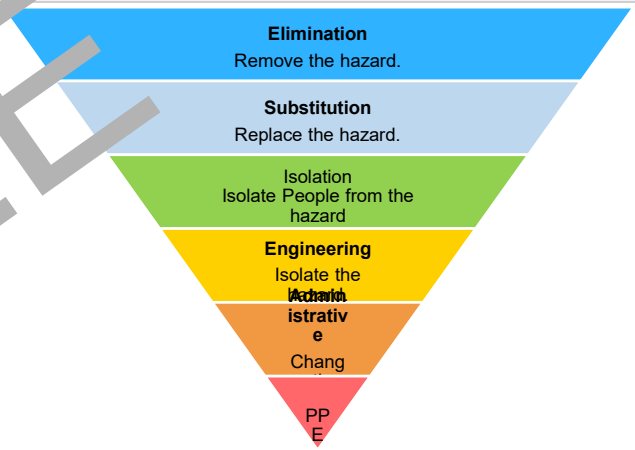
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

RISK MATRIX

LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures Monitor and keep records.

Consequence Scale:

Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
Catastrophic	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
Major	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
Moderate	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
Minor	First-aid only, no lost time	negligible delay	Isolated non-conformance
Insignificant	No injury	no schedule impact	Deviation caught and corrected on site

Notes on Hierarchy of Controls:
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. Substitute
3. Isolate
4. Engineering
5. Administrative
6. PPE

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work *(2023) and ISO 45001:2018 clauses 6–8.*

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. WHS Governance, Duties and Compliance	• Lack of clearly defined WHS responsibilities for officers, PCBUs and workers under WHS Act 2011 • Inadequate consultation with spray painters, maintenance staff and contractors on WHS matters • Failure to monitor and review compliance with WHS Regulations, Codes of Practice and Australian Standards related to spray painting and flammable liquids • Insufficient integration of WHS risk management into business planning for commercial-scale spray painting operations • No formal process to capture lessons learned from incidents, near misses, equipment failures and regulator notices	4A	• Establish a documented WHS governance framework defining officer due diligence obligations, PCBU duties and worker responsibilities in accordance with WHS Act 2011 • Develop and maintain a Spray Painting and Flammable Liquids WHS policy endorsed by senior management and communicated to all relevant workers • Implement a WHS legal compliance register tracking relevant WHS Regulations, Hazardous Chemicals, Confined Spaces, Plant, Noise and Major Hazard Facility provisions where applicable • Schedule periodic WHS assurance audits of spray painting operations, including review of safe systems of work, permits and emergency preparedness • Create a formal consultation and HSR (Health and Safety Representative) structure that includes spray booth operators, maintenance personnel and supervisors • Introduce a structured management review process (e.g. quarterly) to evaluate WHS performance metrics, incidents and audit findings for spray painting activities • Establish change management procedure requiring WHS risk assessment before introducing new products, paints, spray equipment, booth technology or production schedules • Ensure senior officers complete due diligence training specific to hazardous chemicals and spray booth operations	3H
2. Hazardous Chemicals and Coatings Management	• Use of flammable and combustible liquids (primers, topcoats, thinners, adhesives) without robust inventory control • Inaccurate or missing Safety Data Sheets (SDS) for paints, primers, adhesives and cleaning agents • Selection of products with unnecessary toxicity, isocyanates or high volatile organic compound (VOC) content • Incompatible storage of flammable aerosols, adhesives and bulk paints increasing fire and explosion risk • Uncontrolled introduction of new coatings or adhesives without hazard review • Failure to label decanted chemicals used in airless spraying or adhesive spraying • Insufficient segregation of paint and solvent waste streams, increasing risk of	4A	• Implement a hazardous chemicals management procedure that covers procurement, approval, storage, use and disposal of all products used in spray painting airless booths • Maintain an up-to-date hazardous chemicals register with current Australian SDS readily accessible to workers, including isocyanate-containing products and adhesives • Introduce a product approval process requiring WHS review of SDS and preference for low-toxicity, low-VOC and non-isocyanate alternatives where practicable • Ensure all hazardous chemical containers, including decanted spray products, are correctly labelled in accordance with WHS Regulations and GHS requirements • Design and maintain segregated, bunded chemical storage areas for flammable liquids and incompatible substances, in line with AS 1940 and applicable standards • Implement documented waste segregation and disposal procedures for solvent, paint sludge, adhesive waste and contaminated PPE, using licensed waste contractors • Establish controls for maximum allowable chemical inventories in the booth area to minimise fuel load and explosion potential • Train workers and supervisors in chemical hazard awareness, SDS interpretation and correct storage and handling requirements	2M

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	uncontrolled reactions or environmental harm			
3. Spray Booth Design, Engineering Controls and Ventilation	• Inadequate booth design leading to poor capture of overspray and paint fume inhalation • Insufficient airflow and air changes per hour, resulting in flammable vapour accumulation within the booth • Non-compliant ventilation systems for spray application of flammable liquids and commercial-scale painting • Failure of exhaust fans, filters or ducting leading to uncontrolled discharge of hazardous aerosols • Inadequate separation between intake and exhaust leading to recirculation of contaminated air • Lack of interlocks preventing spraying when ventilation or air evacuation systems are not operating • Air leaks or damaged seals in airless sprayers allowing atomised paint or solvent into booth or paint area	4A	• Specify and procure spray booths designed and certified to relevant Australian Standards (e.g. AS/NZS 4114 and fire safety standards) suitable for airless spraying and flammable liquids • Ensure spray booths are designed for adequate laminar airflow and capture efficiency, with engineering calculations documented and retained • Install explosion-protected (Ex rated) ventilation fans and electrical equipment in accordance with hazardous area classifications • Fit automatic interlocks so spray equipment cannot operate unless booth ventilation and air evacuation systems are functioning and within set airflow parameters • Develop a planned inspection and maintenance program for booth ventilation, including airflow measurements, filter replacement schedules and integrity checks of ductwork • Implement periodic independent certification of booth performance, including testing for air velocity, pressure differentials and containment efficiency • Ensure booth design includes proper make-up air systems and clear airflow indicators (e.g. manometers, alarms) visible to operators and supervisors • Standardise sealing and connection methods for airless sprayers, with documented inspection criteria to identify and rectify air leakage points before operation	2M
4. Fire, Explosion and Ignition Source Control	• Accumulation of flammable vapours from spray application of flammable liquids and solvents in booth and surrounding areas • Presence of ignition sources such as non-rated electrical equipment, static discharge, grinding or hot work near booths • Inadequate earthing and bonding of airless spray equipment, workpieces and containers leading to static ignition • Improper storage and transfer of flammable liquids increasing risk of flash fires • Lack of fire detection and suppression systems tailored to spray painting and adhesive spraying operations	4A	[redacted]	2M

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	• Poor control over portable electrical tools, lighting and mobile phones in classified hazardous areas		[redacted]	
5. Airless Spray Equipment Selection, Maintenance and Integrity	• Use of incompatible or non-industrial airless sprayers for commercial-scale spray painting • High-pressure fluid injection injuries from airless spraying systems • Clogging of spray guns and lines leading to ad-hoc clog removal methods that introduce exposure or injection risks • Undetected air or fluid leaks in airless sprayers resulting in uncontrolled atomisation, overspray and inhalation exposure • Inadequate preventive maintenance regime for pumps, hoses, filters and nozzles • Use of damaged or unverified components after repair [illegible]dification	4A	[redacted]	2M
6. Ventilation Performance Monitoring and Air Quality Management	• Progressive degr[illegible]lation of booth ventilation perform[illegible] filters or fan wear • Lack of continuous or routine monitoring of airflow and [illegible] pressure within the booth • Failure to detect and control paint mists, VOCs and isocyanates leading to chronic paint fume inhalation • Ineffective purge or air evacuation cycles between jobs or during booth maintenance • Poor management of make-up air leading to cross-contamination of adjacent work areas	4A	[redacted]	2M

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7. Worker Competency, Training and Supervision	• Inadequate competency of spray painters and maintenance staff in use of airless equipment and booth systems • Lack of specific training on hazards of spray application of flammable liquids and isocyanate-containing products • Insufficient supervision of new or inexperienced workers operating paint spray equipment • Failure to verify understanding of procedures for clog removal, air leakage reparations and booth decommissioning • Informal 'on-the-job' practices that bypass established safe systems of work	3H	[redacted]	2M
8. Safe Systems of Work, Procedures and Permits	• Absence of documented procedures for key spray booth operations and maintenance activities • Uncontrolled work on live systems during reparations of air[illegible]ge in airless sprayers • Inadequate isola[illegible]n and loc[illegible] plant during booth [illegible]epair o[illegible] decommissioning • No permit-to-work system for hi[illegible]risk tasks such as confined b[illegible]ry, hot work or work at height on booth roofs • Failure to integrate contractor activities into site safe systems of work	4A	[redacted]	2M
9. Personal Protective Equipment (PPE) Program Management	• Reliance on PPE as the primary control rather than as part of a hierarchy-based system • Incorrect selection of respiratory protection for paint mists, solvent vapours and isocyanates	3H	[redacted]	1L

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	• Poor fit, maintenance or cleaning of respiratory protection leading to paint fume inhalation • Inadequate management of protective clothing and gloves contaminated with paints, primers and adhesives • Lack of formal program to ensure fit testing, training and replacement of PPE		[redacted]	
10. Emergency Preparedness and Response	• Inadequate planning for fires, chemical spills, uncontrolled releases of flammable vapours or acute solvent exposures • Lack of booth-specific emergency procedures including loss of ventilation, power failure or spray equipment rupture • Insufficient emergency equipment (spill kits, fire extinguishers, eyewash, emergency showers) or poor maintenance thereof • Workers and contractors not trained t respond to high-pressure injection injuries or chemical s • Ineffective comm ication with emergency servic regardi hazardous materials and use n site	4A	[redacted]	2M
11. Health Monitoring, Exposure Surveillance and Fitness for Work	• Chronic exposure to solvents, isocyanates and metal pig s leading to respiratory and neurological health effects • Failure to identify workers who are sensitised or otherwise vulnerable to paint components • Absence of a formal health monitoring program for workers regularly exposed to hazardous chemicals • Unmanaged fatigue or other fitness-for-work issues affecting decision-making and adherence to safe systems	3H	[redacted]	2M

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	• Reluctance of workers to report symptoms or health concerns due to job security fears		[redacted]	
12. Contractor, Visitor and Third-Party Interface Management	• Uncontrolled access of contractors and visitors to spray booth areas during operations • Contractors performing maintenance, decommissioning or repair works without understanding spray painting hazards • Lack of coordination between principal contractor and subcontractors regarding hazardous chemical and fire risks • Inadequate induction for third parties such as clients, inspectors and delivery drivers entering proximity of spray booths	3H	[redacted]	1L
13. Environmental, Waste and Decommissioning Management	• Uncontrolled release of overspray, solvents or adhesives to the environment via exhaust stacks or accidental discharges • Improper management [redacted] sludge, contaminated filters [redacted] solvent waste from spray booth [redacted] erations • Inadequate plann [redacted] ntrol fo decommissioning of paint booths, resulting in exposure to residual contaminants and structural haz [redacted] s • Failure to identify and manage legacy contaminants (e.g. heavy metals, old coatings) during refurbishment or decommissioning	3H	[redacted]	2M
14. Housekeeping, Storage and Material Flow	• Build-up of overspray, combustible dust and waste materials in and around spray booths • Improper storage of paints, primers, adhesives and cleaning agents in production areas beyond designed limits	3H	[redacted]	1L

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	• Obstructed access and egress pathways in booth areas due to poor housekeeping or material staging • Uncontrolled stacking and movement of large workpieces leading to collision damage to booths or ventilation equipment		[redacted]	
15. Monitoring, Reporting and Continuous Improvement	• Under-reporting of incidents, near misses and equipment failures related to spray painting operations • Lack of systematic analysis of WHS data to identify emerging risks or control failures • Failure to act on audit findings, inspection results or worker feedback • Outdated procedures and risk assessments not reflecting current booth technology, products or work practices	3H	[redacted]	1L

EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES FOR ANY STATE THAT ARE NOT APPLICABLE

Queensland & Australian Capital Territory
Work Health and Safety Act 2011
Work Health and Safety Regulations 2011
Legislation QLD: https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws
Codes of Practice QLD: https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice
Legislation ACT: https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations
Codes of Practice ACT: https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice

New South Wales
Work Health and Safety Act 2011
Work Health and Safety Regulations 2025
Legislation NSW: https://www.safework.nsw.gov.au/legal-obligations/legislation
Codes of Practice NSW: https://www.safework.nsw.gov.au/resource-library/list-of-codes-of-practice

Northern Territory
Work Health and Safety (National Uniform Legislation) Act 2011
Work Health and Safety (National Uniform Legislation) Regulations 2011
Legislation NT: https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws
Codes of Practice NT: https://worksafe.nt.gov.au/forms-and-resources/codes-of-practice

South Australia
Work Health and Safety Act 2012 (SA)
Work Health and Safety Regulations 2012 (SA)
Legislation for SA: https://www.safework.sa.gov.au/resources/legislation
Codes of Practice for SA: https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs

Tasmania
Work Health and Safety Act 2012
Work Health and Safety (Transitional and Consequential Provisions) Act 2012
Work Health and Safety Regulations 2012
Work Health and Safety (Transitional) Regulations 2012
Legislation for TAS: https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations
Codes of Practice for TAS: https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.

Victoria
Occupational Health and Safety Act 2004
Occupational Health and Safety Regulations 2017
Legislation VIC: https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations
Codes of Practice VIC: https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice

Western Australia
Work Health and Safety Act 2020
Work Health and Safety Regulations 2022
Legislation Western Australia: https://www.commerce.wa.gov.au/worksafe/legislation
Codes of Practice WA: https://www.commerce.wa.gov.au/worksafe/codes-practice

Safe Work Australia Links
Law and Regulation (All States): https://www.safeworkaustralia.gov.au/law-and-regulation
Model Codes of Practice: https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice

Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work