

Textile Manufacturing

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

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS 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	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

Risk Rating & Required Action:	
4A	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. 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, Planning and PCBU Due Diligence	<ul style="list-style-type: none"> Lack of clear WHS policy and objectives for textile manufacturing and welding of sails Poor understanding of WHS Act 2011 duties by officers and senior management Inadequate resourcing for WHS (budget, staffing, time) to manage textile and welding risks No documented WHS objectives, targets or key performance indicators (KPIs) Failure to consult with workers and health and safety representatives (HSRs) on key risk decisions Absence of formal WHS risk register and documented risk assessment process No system to review, monitor and update WHS management arrangements as operations change 	4A	<ul style="list-style-type: none"> Develop, endorse and communicate a WHS policy aligned with WHS Act 2011 and relevant WHS Regulations, specifically referencing fabric handling, chemical use and welding processes Establish clear WHS governance structure defining PCBU officers, managers and worker responsibilities for textile manufacturing and roll welding operations Implement a documented WHS risk management procedure consistent with ISO 45001 and Safe Work Australia's Code of Practice: How to Manage Work Health and Safety Risks Maintain a site-wide WHS risk register covering system and management risks for textile processing, cutting, sewing, welding and storage activities Set measurable WHS objectives and KPIs (e.g. close-out time for corrective actions, audit completion rates, training completion, incident investigations) and review them quarterly at management meetings Ensure officers undertake documented due diligence activities (e.g. WHS training, inspections, review of performance data, resource allocation) with evidence retained Implement formal WHS planning process (annual WHS plan) with budget allocation for engineering controls, ventilation, guarding, training and monitoring equipment Schedule regular (at least annual) management reviews of WHS performance and risk controls, including outcomes from audits, incidents and consultation Integrate WHS requirements into business planning, procurement, production scheduling and change management processes 	3H
2. Plant and Equipment Management (Textile Machinery and Welding Equipment)	<ul style="list-style-type: none"> Inadequate plant procurement and commissioning process for looms, cutting tables, sewing machines and welding equipment Lack of guarding and interlocks on powered cutters, presses and automated machinery Failure to maintain welding machines, cables and gas systems to manufacturer specifications No documented pre-start inspection system for critical plant (e.g. fabric cutters, welders, hoists) Uncontrolled modification of machinery or welding fixtures without engineering review Inadequate lock out tag out (LOTO) system for servicing and maintenance tasks 	4A	<ul style="list-style-type: none"> Establish a plant lifecycle management procedure covering specification, risk assessment, procurement, installation, commissioning, maintenance and decommissioning of all textile and welding plant in accordance with WHS Regulations (Plant) and relevant Australian Standards Specify minimum safety features for new plant (e.g. fixed and interlocked guards, two-hand controls, emergency stop devices, light curtains, ANZ standard-compliant welding units and gas systems) Require pre-purchase WHS risk assessment and consultation with workers and maintenance personnel for all new textile and welding equipment Implement a documented planned preventive maintenance program for all critical plant and welding systems based on manufacturer instructions and risk level Introduce a mandatory pre-start inspection checklist for sewing machines, cutting tables, welding equipment, hoists and roll handling devices, with defect reporting and lock-out procedures Develop and enforce a lock out tag out (LOTO) procedure for servicing, maintenance and fault-finding on plant, including welding sets and power supplies Ensure all electrical equipment in production and welding areas is tested and tagged at appropriate intervals and non-compliant items are removed from service Maintain clear pedestrian and mobile plant traffic management plans including marked walkways, mirrors, signage and speed limits 	2M

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	<ul style="list-style-type: none"> • Use of non-compliant electrical equipment, power boards and leads in textile and welding areas • Poor segregation of pedestrian and mobile plant (e.g. trolleys, forklifts, roll handlers) • Insufficient planning for plant failure, fire, or gas release from welding operations 		<ul style="list-style-type: none"> • Record and investigate all plant incidents and near misses, and review engineering controls following any significant event • Conduct periodic third-party plant safety audits to verify guarding, interlocks and emergency stops are adequate and functional 	
3. Hazardous Chemicals, Adhesives and Welding Fumes Management	<ul style="list-style-type: none"> • Inadequate identification and register of hazardous chemicals, adhesives, solvents, coatings and cleaning agents used in textile and sail production • Lack of current Safety Data Sheets (SDS) and failure to communicate chemical hazards to workers • Ineffective control of welding fumes, ozone, gases and particulates generated during sail welding • Inappropriate storage, labelling and segregation of flammable or incompatible chemicals • No documented procedure for decanting, mixing or using adhesives and solvents • Insufficient ventilation or local exhaust for welding stations, glue application and cleaning processes • Inadequate health monitoring or exposure assessment for workers regularly exposed to welding fumes or solvents • Poor management of chemical waste, contaminated rags and empty containers • Emergency response plans not addressing chemical spills, gas leaks or over-exposure to welding fumes 	4A	<ul style="list-style-type: none"> • Establish and maintain a hazardous chemicals register including all adhesives, resins, solvents, coatings, cleaning agents and welding related products, in accordance with WHS Regulations (Hazardous Chemicals) • Ensure current SDS are readily available for all hazardous chemicals and welding products, and integrate key controls into procedures and training materials • Conduct exposure risk assessments for welding fumes, solvents and other airborne contaminants with reference to Workplace Exposure Standards for Airborne Contaminants • Improve engineering controls such as local exhaust ventilation (LEV), fume extraction arms and general mechanical ventilation in welding and glue application areas • Develop standard operating procedures (SOPs) for safe handling, decanting, mixing, application and clean-up of hazardous chemicals and adhesives • Introduce a labelling and segregation system for chemical storage, including dedicated flammable cabinets and clearly marked decanted containers • Provide designated storage and disposal systems for chemical waste, used containers and contaminated rags, with licensed disposal contractors where required • Implement health monitoring programs for workers with significant exposure to welding fumes or relevant hazardous substances as required by WHS Regulations • Establish spill response and gas leak emergency procedures, including availability and maintenance of appropriate spill kits and isolation valves • Conduct regular inspections and air-flow checks of ventilation and extraction systems, with maintenance records retained • Substitute higher hazard products with less hazardous alternatives where practicable, and document substitution decisions 	2M
4. Fire and Explosion Risk Management (Textiles, Dust and Welding)	<ul style="list-style-type: none"> • Accumulation of combustible textile dust, offcuts and flammable materials near ignition sources including welding operations 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> Inadequate separation between welding areas and fabric storage or cutting areas Insufficient control of hot work activities (welding, grinding, cutting, heat sealing) on or near sail materials and structures Lack of fire detection, alarm and suppression systems appropriate for textile and welding risks Inadequate storage of flammable liquids, gases and aerosols Poor housekeeping and build-up of lint in machinery and extraction systems No formal hot work permit system or supervision of contractors performing welding and cutting Insufficient emergency response planning and training for fire scenarios, particularly in large open textile production spaces 		<p>[REDACTED]</p>	
5. Manual Handling, Ergonomics and Materials Handling Systems	<ul style="list-style-type: none"> Lack of systems to manage manual handling risks associated with large fabric rolls, completed sails and heat equipment components Poor workstation design leading to repetitive strain, awkward postures and overreach during sewing, cutting and welding of sails Inadequate mechanical aids for moving rolls, pallets and large sails within the facility No documented manual handling risk assessments or task redesign processes Insufficient training and supervision on manual handling principles and use of equipment 	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Inadequate storage systems causing stacking instability, crush risk and difficult retrieval of materials Poor planning of workflow resulting in excessive carrying distances and unnecessary double handling 		[REDACTED]	
6. Noise, Lighting and Thermal Environment Management	<ul style="list-style-type: none"> Excessive noise from textile machinery, compressors and welding processes leading to hearing damage over time Inadequate lighting in cutting, inspection and welding areas causing eye strain and increased error rates Glare from reflective sail materials and welding arcs impacting visual comfort and safety Hot or cold working conditions in large production sheds affecting concentration, fatigue and heat stress risk No systematic monitoring of noise levels or lighting adequacy Poor maintenance of HVAC, extraction and ventilation systems 	3H	[REDACTED]	2M
7. Welding and Hot Work Systems for Sail Fabrication	<ul style="list-style-type: none"> Inadequate welding procedures for fabric and sail components (e.g. PVC membranes, synthetic textiles) Poor control of welding arc flash, UV radiation and spatter affecting welders and nearby personnel Lack of formal competency requirements and verification for welders and assistants Ineffective grounding, cabling and set-up of welding equipment leading to electric shock or burns No documented inspection and maintenance of welding torches, guns, cables, clamps and connectors 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> • Insufficient control of welding near flammable textiles, solvents and fabric dust • No standard system for tagging defective welding equipment out of service 		[REDACTED]	
8. Contractor Management and Outsourced Processes	<ul style="list-style-type: none"> • Contractors performing welding, maintenance or installation work without understanding site-specific WHS risks • Inadequate pre-qualification of contractors for WHS performance and competency • Poor coordination of work between contractors and internal production teams leading to conflicting activities and increased risk • Insufficient supervision and monitoring of contractor WHS performance on-site • No clear allocation of WHS responsibilities between PCBU and contractors, particularly for welding and plant maintenance • Lack of integration of contractor activities into emergency planning and evacuation arrangements 	3H	[REDACTED]	2M
9. Training, Competency and Supervision Systems	<ul style="list-style-type: none"> • Workers operating textile machinery, welding equipment or handling chemicals without adequate training or competency assessment • No structured induction program tailored to textile manufacturing and welding of sails • Inconsistent supervision, particularly for new starters, young workers and temporary staff 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> • Training records incomplete or not maintained, making it difficult to verify competencies • Over-reliance on informal, on-the-job training without standardised content or assessment • Failure to provide refresher training when equipment, procedures or legislation changes 		[REDACTED]	
10. Fatigue, Work Scheduling and Psychosocial Risk Management	<ul style="list-style-type: none"> • Long shifts, overtime or high production demand leading to fatigue and reduced alertness, especially during precision tasks like cutting and welding sails • Inadequate staffing levels causing work intensification and stress • Shift patterns that do not allow adequate rest and recovery between shifts • Poor management of psychosocial hazards such as workload, role clarity, supervision quality and bullying • No formal system for workers to report fatigue or psychosocial concerns without fear of reprisal • Lack of procedures for managing critical tasks when workers are fatigued or stressed 	3H	[REDACTED]	2M
11. Consultation, Worker Participation and Communication	<ul style="list-style-type: none"> • Decisions about plant, layout, welding processes and work methods made without meaningful worker consultation • Lack of elected HSRs or effective health and safety committees • Poor communication of changes to procedures, equipment or production schedules • Insufficient feedback loops for workers to raise WHS concerns and see actions taken 	2M	[REDACTED]	1L

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	<ul style="list-style-type: none"> Language or literacy barriers not addressed in communication of WHS information 		[REDACTED]	
12. Incident Reporting, Investigation and Corrective Action	<ul style="list-style-type: none"> Under-reporting of incidents, near misses and hazards due to lack of trust, awareness or complex processes Inadequate investigation of incidents involving textile machinery, welding operations or manual handling Failure to identify root causes and systemic issues (training, supervision, maintenance, design) in investigations Corrective actions not defined, implemented or verified for effectiveness No trend analysis of incident data to identify recurring issues in textile and welding operations 	3H	[REDACTED]	2M
13. Change Management, Design and Layout of Textile and Welding Operations	<ul style="list-style-type: none"> Introduction of new materials, welding techniques or machinery without formal risk assessment Layout changes increasing interaction between people, plant and welding activities Scaling up production or capacity without updating ventilation, fire systems and material handling capacity Poor integration of WHS requirements into design of new workstations, welding bays or storage systems Temporary setups or trial equipment becoming permanent without proper controls 	3H	[REDACTED]	2M
14. Emergency Preparedness and Response	<ul style="list-style-type: none"> Inadequate planning for emergencies such as fire, chemical spill, serious injury, gas leak or electrical incident in textile and welding areas 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> • Poorly marked or obstructed emergency exits and evacuation routes • Lack of trained first aiders, wardens and spill responders on all shifts • Emergency equipment (extinguishers, eyewash, first aid, alarms) not maintained or suited to textile and welding risks • Workers and contractors unaware of emergency procedures, assembly points or roles • No specific planning for persons with disabilities or visitors during an emergency 		<div style="background-color: black; height: 15px; width: 100%;"></div>	

SAMPLE

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>

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>

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-codes-of-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>

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011
 Work Health and Safety (National Uniform Legislation) Regulation 2011
 Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>
 Codes of Practice NT: <https://worksafe.nt.gov.au/factsheets-and-resources/codes-of-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>

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>

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

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.