

Cleaning Chemicals

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:	

SAMPLE

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. Governance, WHS Duties and Chemical Risk Management Framework	<ul style="list-style-type: none"> Absence of a documented hazardous chemicals management procedure aligned with WHS Act 2011, WHS Regulations and relevant Codes of Practice Lack of clearly defined WHS roles, responsibilities and due diligence obligations for officers in relation to cleaning chemicals Failure to systematically identify all hazardous chemicals (including nanotech products, solvents, degreasers and hazardous cleaning agents) No formal risk assessment process for cleaning chemicals, including incompatible chemicals and high-risk processes (e.g. mixing products, cleaning mixers/tools) Inadequate consultation with workers and health and safety representatives about changes to products, processes or controls Poor integration of chemical risk management into overall WHS management system, leading to ad-hoc controls No formal process to review incidents, near misses, health monitoring data or exposure results related to cleaning chemicals 	High	<ul style="list-style-type: none"> Establish and maintain a documented hazardous chemicals management procedure consistent with the WHS Act 2011, WHS Regulations and Safe Work Australia Codes of Practice (e.g. Managing Risks of Hazardous Chemicals in the Workplace) Define and document WHS responsibilities for officers, managers, supervisors and workers in relation to chemical procurement, use, storage, disposal and emergency response Implement a formal chemical risk assessment process (initial and periodic reviews) for all cleaning chemicals, including nanotech products, heavy-duty degreasers, solvents and hazardous cleaning products Maintain a central hazardous chemicals register that captures all cleaning agents, their classifications, storage locations and quantities, and ensure it is easily accessible to workers and emergency services Embed consultation mechanisms (toolbox talks, HSR meetings, safety committees) for reviewing proposed new chemicals, new application methods and changes to cleaning processes Integrate chemical risk controls into the broader WHS management system (policies, procedures, training, contractor management, purchasing, and change management processes) Establish a scheduled review program (e.g. annually or after incidents) of the hazardous chemicals management system, using audit findings, incident data and worker feedback to drive continuous improvement 	Medium
2. Procurement, Supplier Management and Product Selection	<ul style="list-style-type: none"> Procurement of unnecessary or excessively hazardous cleaning chemicals where safer alternatives exist (e.g. high-VOC solvents, aggressive degreasers, sensitising disinfectants) Purchase of incompatible chemicals that can react dangerously when mixed, stored together, or used sequentially on the same surface Inadequate supplier information on product composition, nanomaterial 	High	<ul style="list-style-type: none"> Implement a formal procurement procedure requiring WHS review and approval before introducing any new cleaning chemical, including nanotech-based formulations and solvents Apply a substitution hierarchy mandating selection of the least hazardous effective product (e.g. low-VOC, non-flammable, non-corrosive alternatives) wherever reasonably practicable Require suppliers to provide compliant Australian SDS (issued/updated within the last 5 years) and documented information on incompatibilities and safe use, particularly for nanotechnology-based products Establish approved-products lists for cleaning chemicals, specifying permitted applications, maximum concentrations and prohibited combinations Restrict purchasing of hazardous chemicals to authorised personnel and approved suppliers under contract or pre-qualification arrangements 	Medium

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	<ul style="list-style-type: none"> content, stability and incompatibilities for nanotech-based cleaning products Acquisition of products without current Safety Data Sheets (SDS) or with poor-quality, non-compliant SDS Ad-hoc purchasing from retail outlets or online vendors that bypass internal WHS review processes Bulk purchasing leading to excessive volumes on site, increasing storage and fire/explosion risks Procurement of industrial-strength products (e.g. heavy-duty degreasers, corrosive cleaners) for low-risk domestic-type tasks 		<ul style="list-style-type: none"> Set quantitative limits for on-site storage volumes of hazardous chemicals, aligned with regulatory requirements and fire engineering advice Include WHS performance and technical support (e.g. training, consultation on safer alternatives) as criteria for supplier selection and ongoing evaluation 	
3. Chemical Identification, SDS, Labelling and Information Management	<ul style="list-style-type: none"> Unlabelled or incorrectly labelled decanted containers leading to inadvertent mixing or misuse of cleaning chemicals Workers not having ready access to current SDS for heavy-duty degreasers, solvents, nanotech-based products and other hazardous chemicals Failure to identify specific hazards such as flammability, oxidising properties, sensitisation, corrosion, reproductive toxicity (e.g. reproductive, carcinogenic), respiratory hazards) Inconsistent or non-GHS compliant labelling on imported products or legacy stock Poor communication of specific incompatibilities (e.g. acids with hypochlorite bleach, oxidisers with solvents) to workers and contractors Lack of clear identification of nanomaterial content and related health hazards due to incomplete manufacturer documentation 	High	<ul style="list-style-type: none"> Require GHS-compliant labelling for all original and decanted containers of cleaning chemicals, including product name, hazard pictograms, signal words and precautionary statements Prohibit decanting of hazardous chemicals into unlabelled or food/drink containers, supported by clear procedures and supervision Maintain an electronic and/or hard-copy SDS library accessible at points of use and in emergency control centres, ensuring all SDS are current and in English Implement a periodic audit program to verify labelling, SDS currency and correct classification for all cleaning chemicals on site Develop and distribute simplified hazard summaries or SOPs that highlight key hazards, incompatibilities and critical controls for each major product group Require suppliers of nanotech-based cleaning products to disclose nano-ingredients, particle sizes, stability and recommended exposure controls, and record this in internal documentation Provide targeted briefings to workers on critical incompatibilities (e.g. never mixing acids with chlorine-containing products, keeping solvents away from oxidisers and ignition sources) 	Low
4. Storage, Segregation and Inventory Control of Cleaning Chemicals	<ul style="list-style-type: none"> Incompatible chemicals (e.g. acids, alkalis, oxidisers, solvents, chlorine-containing products) stored 	High		Medium

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	<p>together leading to fire, explosion or toxic gas generation if containers fail or leak</p> <ul style="list-style-type: none"> • Insufficient ventilation in chemical storage rooms, increasing vapour build-up from solvents, degreasers or volatile cleaners • Improper storage of nanotech-based products where settling, agglomeration or container degradation may alter hazard profiles • Inadequate secondary containment and spill control, leading to environmental contamination and worker exposure • Overstocking of flammable or corrosive cleaning chemicals increasing fire load and severity of potential incidents • Insecure storage areas allowing unauthorised access by untrained workers, visitors or members of the public • Storage of chemicals on shoulder height or in unstable configurations, increasing risk of container falls and spills • Failure to segregate cleaning chemicals from food areas, amenities or incompatible workplace processes 		<p>[REDACTED]</p>	
5. Mixing, Dilution and Incompatibility Management	<ul style="list-style-type: none"> • Uncontrolled mixing of different cleaning chemicals (e.g. acids with chlorine-based products, ammonia with bleach, oxidisers with organic solvents) causing toxic gas release or violent reactions • Incorrect dilution rates of concentrates leading to excessive exposure to corrosive or irritant agents during routine cleaning • Use of heavy-duty degreasers and solvents on inappropriate surfaces or equipment, creating unexpected 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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	<p>reactions, off-gassing or degradation of materials</p> <ul style="list-style-type: none"> Sequential use of incompatible products on the same surface or in mixers and tools, causing residual chemical interactions Lack of engineering controls such as closed dilution systems, resulting in splashes, aerosol generation and inhalation hazards Inadequate instruction on mixing order, water temperature, and prohibition of mixing across product lines, particularly for multi-component or nanotech systems 		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	
6. Plant, Equipment and Engineering Controls for Chemical Use	<ul style="list-style-type: none"> Inadequate containment or ventilation when using solvents, heavy-duty degreasers or nanotech-based sprays leading to inhalation of vapours, aerosols or fine particles Use of unsuitable application equipment (e.g. high-pressure sprays, mists) that increases airborne exposure and overspray Poor maintenance of extraction systems, local exhaust ventilation (LEV) or general ventilation, resulting in ineffective control of airborne contaminants Lack of dedicated washing and rinsing facilities for cleaning mixers, tools and equipment leading to spillage and uncontrolled runoff Use of incompatible seals, hoses, pump components or containers that degrade when exposed to certain cleaning chemicals or solvents Inadequate segregation or guarding where flammable solvents and degreasers are used near ignition sources or electrical equipment 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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	<ul style="list-style-type: none"> Improvised decanting and mixing setups (funnels, open buckets) lacking spill containment and stability 			
7. Training, Competency and Supervision for Chemical Use	<ul style="list-style-type: none"> Workers not understanding the specific hazards of the cleaning chemicals they handle, including long-term health effects and nanomaterial risks Incorrect use of PPE, including selection, fitting, maintenance and disposal, leading to a false sense of protection Inadequate induction for new workers, contractors and labour-hire staff regarding site-specific chemical procedures and emergency arrangements Language, literacy or cultural barriers preventing workers from fully understanding SDS and written procedures Insufficient supervision or competent verification for higher-risk chemical tasks (e.g. use of concentrated corrosives, solvents, heavy-duty greases) Lack of refreshers training leading to drift from safe practices and normalisation of unsafe behaviours 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium
8. Personal Protective Equipment and Health Monitoring Systems	<ul style="list-style-type: none"> Reliance on PPE as the primary control in place of higher-order controls for hazardous cleaning chemicals Incorrect PPE selection for specific cleaning agents, solvents or nanotech-based products (e.g. wrong glove material, inadequate respiratory protection) Poor PPE management, including inadequate cleaning, storage or replacement, leading to contamination and dermal exposure Lack of systems for fit-testing and fit-checking tight-fitting respirators where required 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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	<ul style="list-style-type: none"> Absence of health monitoring or exposure surveillance for workers handling chemicals with known chronic health risks (e.g. certain solvents or sensitisers) No process to review PPE performance following incidents, near misses or introduction of new chemicals 		[REDACTED]	
9. Safe Systems of Work for Using Cleaning Chemicals on Plant, Mixers and Tools	<ul style="list-style-type: none"> Absence of documented safe systems of work for using hazardous cleaning products on plant, mixers and tools, leading to inconsistent practices Exposure to atomised or aerosolised cleaners when cleaning moving or recently operated machinery, mixers or tools Inadequate isolation and lockout systems during cleaning of mixers and mechanical equipment, leading to entanglement or crush hazards combined with chemical exposure Use of heavy-duty degreasers and solvents in confined or poorly ventilated areas during equipment cleaning Residue build-up of incompatible chemicals on mixers and tools may react with subsequent cleaning products or process materials Cross-contamination of work areas and tools from poor decontamination and waste handling procedures 	High	[REDACTED]	Medium
10. Management of Nanotech-Based Cleaning Products	<ul style="list-style-type: none"> Limited toxicological data and uncertainty around long-term health effects of engineered nanomaterials used in certain cleaning products Potential for inhalation of nano-aerosols during spraying, misting or agitation, particularly in enclosed or poorly ventilated spaces Inadequate recognition of nanotech products as potentially higher-risk, leading to use of standard controls that may not be sufficient 	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> Lack of specific information from suppliers about nano-content, particle size, stability and appropriate control measures Potential environmental release and accumulation of nanoparticles in wastewater streams from cleaning operations Difficulty in monitoring worker exposure or environmental levels due to limited standard measurement methods 		[REDACTED]	
11. Environmental Management, Waste and Spill Response for Cleaning Chemicals	<ul style="list-style-type: none"> Uncontrolled discharge of chemical residues, solvents, degreasers and nanotech-containing waste to stormwater or soil Inadequate planning and systems for spill response, leading to worker exposure and environmental contamination during incidents Improper disposal of empty or partially used containers, including incompatible waste mixing in general rubbish No clear accountability for management of hazardous cleaning waste streams, including segregation of solvent-contaminated materials Lack of integration between safety and environmental management systems for chemical use, leading to conflicting or incomplete controls 		[REDACTED]	Medium
12. Incident Management, Emergency Preparedness and Continuous Improvement	<ul style="list-style-type: none"> Delayed or ineffective response to chemical exposures, spills, fires or gas releases involving cleaning chemicals Lack of clear emergency procedures for scenarios such as solvent fires, toxic gas from mixed chemicals, or eye/skin exposure to corrosive cleaners Inadequate emergency equipment (e.g. eyewash, safety showers, first aid) 	High	[REDACTED]	Low

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	resources, fire extinguishers) or poor access/maintenance • Under-reporting of chemical-related incidents and near misses, preventing learning and improvement • Emergency services not being aware of the types and quantities of cleaning chemicals stored on site • Failure to analyse trends and implement systemic corrective actions following incidents involving cleaning chemicals		[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	

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.