

SSFOT01 Adhesives / Compounds Specialist

1. Job role

TCF sub-sector	Footwear Production
Functional area	Materials technology
Job role	SSFOT01 Adhesives / Compounds Specialist
Job role description	Responsible for the selection, formulation, testing and optimisation of adhesives and bonding compounds used in footwear construction. Ensures bonding strength, durability, compliance and sustainability requirements are met across lasting, sole attachment and assembly processes.
Performance expectations	• Ensure consistent and durable bonding performance • Maintain compliance with safety and chemical handling standards • Minimise bonding failures and product returns • Optimise adhesive usage and reduce waste • Support innovation in low-impact adhesive technologies • Provide technical guidance to production teams
Specialisation	• Cemented sole attachment systems • Heat-activated and reactive adhesive systems • Sustainable and solvent-reduced compounds
Application in other Textile, Clothing and Footwear (TCF) sectors	Transferable to leather goods manufacturing, upholstery and advanced materials industries.

2. Key tasks and critical work functions

Key tasks	• Select appropriate adhesives for footwear construction methods • Test bonding strength and durability performance • Monitor curing times and environmental conditions • Troubleshoot bonding failures in production • Review supplier technical data and safety documentation • Train production staff on correct adhesive application • Maintain records of compound formulations and test results
Critical work functions	• Ensuring compatibility between materials and adhesives • Maintaining structural integrity of sole attachment • Complying with WHS and hazardous substance regulations • Reducing risk of delamination or bond failure • Supporting efficient production throughput • Promoting sustainable chemical usage practices • Providing technical documentation for compliance audits

3. Technical skills

Adhesive formulation knowledge	Understand solvent-based, water-based and reactive systems.
Bond strength testing	Conduct peel and shear strength testing.
Surface preparation techniques	Prepare materials for optimal bonding.
Curing and activation processes	Monitor heat and pressure activation requirements.
Chemical safety management	Apply WHS procedures for hazardous substances.
Sustainability assessment*	Evaluate environmental impact of compounds.
Supplier technical evaluation	Review material safety data sheets (MSDS).
Technical reporting	Document testing results and corrective actions.

*Technical skills identified as emerging skills in TCF industry.

4. Generic Skills

Generic Skill	Brief description
Analytical thinking	Interpret bonding performance data.
Attention to detail	Ensure precise measurement and application control.
Problem solving	Identify root causes of bonding failures.
Communication	Explain technical processes clearly to production teams.
Collaboration	Work with design and material technologists.
Compliance awareness	Maintain regulatory and safety standards.

5. Emerging skills

Emerging skills	• Low-VOC and solvent-free adhesive technologies • Bio-based and recyclable bonding compounds • Automated adhesive dispensing systems • Digital monitoring of curing processes • Circular economy chemical solutions • Advanced polymer bonding innovations
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6. VET Qualifications and Skill Sets

Entry-level preparation	MSL50122 Diploma of Laboratory Technology or equivalent in Materials Technology, Manufacturing or related field.
Advanced development	MSL60118 Advanced Diploma of Laboratory Operations or Bachelor studies in Chemical, Polymer or Materials Engineering.

7. Job progression

Possible job progression	Possible job progression: Adhesives / Compounds Specialist → Senior Technical Specialist → Technical Manager → Operations or Product Development Manager
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8. Classification

Australian Qualifications Framework	AQF Level 5-7 (enterprise dependent)
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3 (Technicians / Professionals)
Open Source Classification of Occupations for Australia (OSCA)	Adhesives / Compounds Specialist - Footwear Production



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