

# SSFOT01 Adhesives / Compounds Specialist

## Disclaimer

These Occupational Frameworks and Skill Profiles have been developed as workforce planning, occupational mapping and skills reference resources for the Australian textile, clothing and footwear (TCF) industry. They are intended to describe the typical functions, responsibilities, skills and capabilities associated with occupations across the industry.

These documents are not intended to replace or override industrial instruments or employment arrangements, including awards, enterprise agreements, employment contracts, position descriptions, classification structures, licensing or regulatory requirements, or other statutory obligations. Where differences arise, the relevant industrial, legislative or regulatory requirements take precedence. The Skill Profiles should be used as complementary reference documents to support workforce planning, career development, training and skills recognition.

## 1. Job role

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| 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         | <ul style="list-style-type: none"> <li>Ensure consistent and durable bonding performance.</li> <li>Maintain compliance with safety and chemical handling standards.</li> <li>Minimise bonding failures and product returns.</li> <li>Optimise adhesive usage and reduce waste.</li> <li>Support innovation in low-impact adhesive technologies.</li> <li>Provide technical guidance to production teams.</li> </ul> |
| Specialisation                   | <ul style="list-style-type: none"> <li>Cemented sole attachment systems.</li> <li>Heat-activated and reactive adhesive systems.</li> <li>Sustainable and solvent-reduced compounds.</li> </ul>                                                                                                                                                                                                                      |
| Application in other TCF sectors | Transferable to leather goods manufacturing, upholstery and advanced materials industries.                                                                                                                                                                                                                                                                                                                          |

## 2. Key tasks and critical work functions

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| Key tasks | <ul style="list-style-type: none"> <li>Select appropriate adhesives for footwear construction methods.</li> <li>Test bonding strength and durability performance.</li> <li>Monitor curing times and environmental conditions.</li> <li>Troubleshoot bonding failures in production.</li> <li>Review supplier technical data and safety documentation.</li> <li>Train production staff on correct adhesive application.</li> <li>Maintain records of compound formulations and test results.</li> </ul> |
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| Critical work functions | <ul style="list-style-type: none"> <li>Ensuring compatibility between materials and adhesives.</li> <li>Maintaining structural integrity of sole attachment.</li> <li>Complying with WHS and hazardous substance regulations.</li> <li>Reducing risk of delamination or bond failure.</li> <li>Supporting efficient production throughput.</li> <li>Promoting sustainable chemical usage practices.</li> <li>Providing technical documentation for compliance audits.</li> </ul> |
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### 3. Technical skills

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| 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 safety data sheets (SDS).                            |
| Technical reporting             | Document testing results and corrective actions.            |

\*Technical skills identified as emerging skills in TCF industry.

### 4. Generic Skills

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| 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

|                 |                                                                                                                                                                                                                                                                                                                                                                                  |
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| Emerging skills | <ul style="list-style-type: none"> <li>Low-volatile organic compound (VOC) and solvent-free adhesive technologies.</li> <li>Bio-based and recyclable bonding compounds.</li> <li>Automated adhesive dispensing systems.</li> <li>Digital monitoring of curing processes.</li> <li>Circular economy chemical solutions.</li> <li>Advanced polymer bonding innovations.</li> </ul> |
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### 6. VET Qualifications and Skill Sets

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| 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

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| 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

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| Australian Qualifications Framework                            | AQF Level 5-7 (enterprise dependent).                  |
| Australian Bureau of Statistics (ABS) Skill Levels             | Skill Level 1.                                         |
| Open Source Classification of Occupations for Australia (OSCA) | 244231 Chemist OSCA Specialisation Industrial Chemist. |

Skills Insight is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations.