

# CS68 Process Chemist / Leather Chemistry 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

| TCF sub-sector                   | Cross-sector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Job role                         | CS68 Process Chemist / Leather Chemistry Specialist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Job role description             | <p>Develops, manages and optimises chemical processes used in TCF production, including dyeing, finishing, tanning and treatment processes.</p> <p>The role ensures product quality, process efficiency and compliance with environmental and safety standards. In leather production, it focuses on tanning chemistry, finishing treatments and material performance. The role integrates laboratory analysis with production processes to support innovation, sustainability and continuous improvement.</p>                                                                                                                                                                                                                 |
| Performance expectations         | <ul style="list-style-type: none"> <li>Ensuring chemical processes meet product quality specifications.</li> <li>Optimising production processes for efficiency and consistency.</li> <li>Maintaining compliance with environmental and safety regulations.</li> <li>Supporting development of new materials and finishes.</li> <li>Minimising waste, emissions and environmental impact.</li> <li>Maintaining accurate formulation and process documentation.</li> <li>Supporting troubleshooting of production issues.</li> <li>Collaborating with production, QA and engineering teams.</li> <li>Ensuring safe handling and storage of chemicals.</li> <li>Supporting sustainability and innovation initiatives.</li> </ul> |
| Specialisation (optional)        | Leather tanning chemistry, dye chemistry, finishing processes, coatings, adhesives, sustainable chemistry, chemical process optimisation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Application in other TCF sectors | <ul style="list-style-type: none"> <li>Leather goods production supporting tanning and finishing processes.</li> <li>Textile manufacturing supporting dyeing, coating and finishing processes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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|  | <ul style="list-style-type: none"> <li>• Apparel production supporting washing and treatment processes.</li> <li>• Footwear production supporting adhesives and material treatments.</li> <li>• Technical textiles supporting advanced chemical processing.</li> <li>• Dry cleaning and laundry supporting chemical treatment systems.</li> <li>• Manufacturing industries supporting process chemistry and materials development.</li> </ul> |
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## 2. Key tasks and critical work functions

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| Key tasks               | <ul style="list-style-type: none"> <li>• Developing and adjusting chemical formulations.</li> <li>• Monitoring and controlling production processes.</li> <li>• Conducting laboratory testing and analysis.</li> <li>• Optimising process parameters for efficiency and quality.</li> <li>• Troubleshooting production and quality issues.</li> <li>• Ensuring compliance with environmental regulations.</li> <li>• Maintaining chemical safety and handling procedures.</li> <li>• Supporting research and development activities.</li> </ul> |
| Critical work functions | <ul style="list-style-type: none"> <li>• Ensuring consistency and quality of chemical processes.</li> <li>• Maintaining safe and compliant chemical operations.</li> <li>• Optimising resource use and reducing waste.</li> <li>• Supporting innovation in materials and processes.</li> <li>• Maintaining accurate documentation and traceability.</li> <li>• Integrating laboratory findings with production processes.</li> <li>• Ensuring product performance and durability.</li> </ul>                                                    |

## 3. Technical skills

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| Chemical formulation     | Developing and adjusting chemical mixtures and treatments.           |
| Process control          | Monitoring and controlling production processes.                     |
| Laboratory analysis      | Conducting chemical testing and analysis.                            |
| Material science         | Understanding properties of textiles, leather and related materials. |
| Environmental compliance | Applying regulations related to chemical use and disposal.           |
| Quality assurance        | Ensuring product meets technical and performance standards.          |
| Data analysis            | Interpreting test results and process data.                          |

## 4. Generic Skills

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| Analytical thinking | Interpreting data and process performance.      |
| Problem solving     | Resolving production and quality issues.        |
| Attention to detail | Ensuring precision in formulations and testing. |
| Communication       | Working with cross-functional teams.            |

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| Time management      | Managing testing and production timelines.           |
| Compliance awareness | Understanding safety and environmental requirements. |

## 5. Emerging skills

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| Emerging skills | <ul style="list-style-type: none"> <li>• Developing sustainable and bio-based chemical processes.</li> <li>• Applying circular economy principles in materials processing.</li> <li>• Using advanced analytical and testing technologies.</li> <li>• Integrating digital monitoring and process control systems.</li> <li>• Supporting low-impact and water-efficient processes.</li> <li>• Applying Environmental, Social and Governance (ESG) and sustainability reporting frameworks.</li> </ul> |
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## 6. VET Qualifications and Skill Sets

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| Entry-level preparation | MSL40122 Certificate IV in Laboratory Techniques or equivalent qualification.                                                                      |
| Advanced development    | MSL50122 Diploma of Laboratory Technology or equivalent qualification or bachelor's degree in chemistry, chemical engineering or materials science |

## 7. Job progression

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| Possible job progression | Laboratory Technician → Process Chemist → Senior Chemist → Technical Manager → Head of Materials / R&D. |
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## 8. Classification

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| Australian Qualifications Framework                            | AQF Level 4-7.                                         |
| Australian Bureau of Statistics (ABS) Skill Levels             | Skill Level 1.                                         |
| Open Source Classification of Occupations for Australia (OSCA) | 244231 Chemist OSCA Specialisation Industrial Chemist. |



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