

SSNST13 Multiskilled Yarn Dyeing Operator

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	Natural and Synthetic Textile Manufacturing
Functional area	Yarn Production
Job role	SSNST13 Multiskilled Yarn Dyeing Operator
Job role description	Operates, monitors and supports batch yarn dyeing systems used in the manufacture of natural and synthetic textile yarns. The role prepares dye formulations, operates yarn dyeing equipment, monitors colour quality and controls dyehouse production processes to achieve product specifications. The role works across yarns supplied in package, hank (skein) and beam form using dyeing technologies including package dyeing, hank dyeing, beam dyeing and specialised yarn dyeing systems. It requires knowledge of textile fibres, yarn construction, dye chemistry, process control and quality requirements. The position collaborates with laboratory personnel, production teams, maintenance technicians and quality staff to maintain efficient, safe and sustainable yarn dyehouse operations.
Performance expectations	- Producing yarns that meet colour and quality specifications. - Maintaining colour consistency across dye lots. - Operating yarn dyeing equipment safely and efficiently. - Preparing accurate dye formulations. - Minimising dyeing faults, waste and reprocessing. - Maintaining production documentation and traceability. - Supporting environmental compliance. - Contributing to productivity and continuous improvement.
Specialisation	Package dyeing, hank dyeing, beam dyeing, dye formulation, colour matching, yarn dyehouse production.
Application in other TCF sectors	- Apparel manufacturing. - Knitwear manufacturing. - Home furnishings. - Carpet manufacturing.

	• Industrial and technical textiles. • Medical textiles. • Performance textiles.
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2. Key tasks and critical work functions

Key tasks	• Prepare dye formulations and chemical additions. • Operate package, hank and beam dyeing equipment. • Load and unload yarn carriers and dye vessels. • Monitor dyeing process parameters. • Inspect colour quality and dye penetration. • Complete washing, rinsing and after-treatment processes. • Maintain production records and batch documentation. • Perform routine operator maintenance. • Follow WHS and environmental procedures.
Critical work functions	• Maintain colour consistency between dye lots. • Ensure compliance with customer specifications. • Prevent yarn dyeing defects. • Support efficient dyehouse production. • Maintain production traceability. • Support quality assurance. • Minimise water, chemical and energy consumption. • Maintain safe dyehouse operations.

3. Technical skills

Yarn dyeing operations	Operating package, hank and beam dyeing systems.
Dye chemistry	Understanding dyes, auxiliaries and fibre compatibility.
Dye formulation	Preparing accurate dye recipes and chemical additions.
Process control	Monitoring temperature, pressure, pH, liquor ratio and dye cycle parameters.
Colour quality	Assessing shade consistency, colour matching and dye penetration.
Textile knowledge	Understanding fibre characteristics, yarn construction and dyeing behaviour.
Troubleshooting	Identifying and resolving yarn dyeing faults including uneven dyeing, barre, streaking and poor penetration.
Documentation and traceability	Maintaining production records, dye recipes and batch documentation.
Environmental compliance	Supporting chemical handling, wastewater management and sustainable dyehouse practices.

4. Generic Skills

Attention to detail	Maintaining colour accuracy and product quality.
Communication	Working with laboratory, production and quality personnel.
Problem solving	Resolving dyeing and production issues.

Teamwork	Supporting integrated dyehouse operations.
Time management	Meeting production schedules.
Adaptability	Working across different yarn types and dyeing technologies.
Reliability	Maintaining consistent production performance.
Professionalism	Following safety, quality and environmental standards.

5. Emerging skills

Emerging skills	• Digital colour management systems. • Automated dye dispensing technologies. • Industry 4.0 process monitoring. • AI-assisted dyehouse optimisation. • Sustainable dye chemistry. • Low-liquor-ratio dyeing technologies. • Water recycling and resource recovery. • Circular textile manufacturing.
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6. VET Qualifications and Skill Sets

Entry-level preparation	MST40122 Certificate IV in Textile Design and Technology or equivalent.
Advanced development	Advanced enterprise, supplier and technical training in yarn dyeing operations, colour management and sustainable dyehouse technologies.

7. Job progression

Possible job progression	Yarn Dyehouse Assistant → Yarn Dyeing Operator → Senior Yarn Dyeing Operator → Lead Dyeing Operator → Dyehouse Team Leader → Dyehouse Supervisor.
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8. Classification

Australian Qualifications Framework	Level 4-5.
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 4.
Open Source Classification of Occupations for Australia (OSCA)	731432 Textile or Footwear Production Machine Operator.



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