

SSNST03 Multiskilled Fibre Preparation and Spinning 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	SSNST03 Multiskilled Fibre Preparation and Spinning Operator
Job role description	Performs and coordinates multiple operational stages involved in the preparation, processing and spinning of natural and synthetic fibres into yarns within the TCF industry. This role is identified as a core occupation within the Yarn Production function of the Natural and Synthetic Textile Manufacturing Occupational Framework. The Multiskilled Fibre Preparation and Spinning Operator is a highly adaptable technical production worker responsible for operating, monitoring and adjusting machinery and processes across fibre opening, cleaning, blending, carding, combing, drawing, roving and spinning operations. The role supports production of yarns manufactured from both natural fibres such as wool and cotton and synthetic fibres including polyester, nylon, acrylic and blended fibres. Operators work across a range of spinning technologies including ring spinning, rotor spinning, air-jet spinning and specialised yarn production systems. The position is responsible for ensuring fibres are processed efficiently and consistently to achieve required yarn quality, strength, count, twist, uniformity and production performance standards. The role requires detailed understanding of fibre behaviour, spinning mechanics, yarn formation, process optimisation, machine setup, tension control and quality monitoring. The Multiskilled Fibre Preparation and Spinning Operator works closely with production supervisors, textile technologists,

	maintenance personnel, quality inspectors and process technicians to maintain operational continuity, minimise waste, support machine efficiency and achieve production schedules. The role also contributes to troubleshooting, process adjustments, cleaning, machine maintenance support, sustainability initiatives and continuous improvement activities within textile manufacturing operations.
Performance expectations	- Producing yarns that meet quality, count, strength and performance specifications. - Operating fibre preparation and spinning machinery safely and efficiently. - Maintaining production throughput and workflow continuity. - Minimising yarn faults, fibre contamination and production waste. - Supporting efficient machine setup, adjustment and process control. - Monitoring fibre quality, yarn formation and process performance. - Supporting compliance with safety, quality and operational procedures. - Maintaining traceability and production documentation. - Contributing to productivity, sustainability and continuous improvement initiatives.
Specialisation	Fibre preparation, carding, combing, drawing, spinning operations, yarn formation, blended yarn systems, synthetic fibre processing and textile production operations.
Application in other TCF sectors	Technical textiles, apparel textiles, furnishing textiles, industrial textiles, composite reinforcement yarns, medical textiles and advanced textile manufacturing.

2. Key tasks and critical work functions

Key tasks	- Operating fibre opening, cleaning and blending machinery. - Performing carding, combing, drawing and roving operations. - Operating ring spinning, rotor spinning and other spinning systems. - Monitoring yarn count, twist, tension and winding performance. - Loading fibre materials and managing process flow between production stages. - Adjusting machine settings to maintain yarn quality and production efficiency. - Identifying yarn defects, fibre contamination and machine faults. - Conducting routine cleaning and basic machine maintenance activities. - Recording production, quality and traceability information. - Following workplace safety, quality and operational procedures.
Critical work functions	- Ensuring consistent yarn quality and production performance. - Maintaining fibre integrity and correct yarn formation throughout processing. - Preventing contamination, breakages, faults and process inefficiencies.

	- Supporting efficient workflow between fibre preparation and spinning stages. - Maintaining safe operation of spinning and fibre preparation equipment. - Supporting compliance with technical specifications and production standards. - Maintaining traceability and production documentation integrity. - Contributing to operational reliability, productivity and sustainability outcomes.
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3. Technical skills

Fibre preparation	Operating opening, blending, carding and combing systems.
Spinning operations	Managing yarn formation and spinning machinery.
Yarn quality control	Monitoring count, twist, strength and yarn consistency.
Machine setup and adjustment	Adjusting drafting, tension and spinning parameters.
Fibre and yarn knowledge	Understanding natural and synthetic fibre behaviour.
Process monitoring	Identifying faults and maintaining production performance.
Basic maintenance	Performing cleaning and routine machine servicing.
Documentation and traceability	Maintaining production and quality records.

4. Generic Skills

Attention to detail	Maintaining yarn quality and process consistency.
Communication	Working with supervisors, technicians and production teams.
Problem solving	Resolving spinning and fibre processing issues.
Teamwork	Supporting integrated textile production operations.
Time management	Meeting production schedules and throughput targets.
Adaptability	Working across multiple fibre preparation and spinning systems.
Reliability	Maintaining consistent operational performance.
Professionalism	Following operational, safety and quality standards

5. Emerging skills

Emerging skills	- Automated spinning and intelligent machine monitoring systems. - Smart textile yarn development and functional fibre integration. - Sustainable fibre processing and recycled yarn manufacturing. - Industry 4.0 integration in spinning operations.
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	- Digital production monitoring and predictive maintenance systems. - Advanced blended fibre and high-performance yarn technologies.
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6. VET Qualifications and Skill Sets

Entry-level preparation	No skill set or qualification.
Advanced development	No skill set or qualification.

7. Job progression

Possible job progression	Fibre Preparation Assistant → Spinning Operator → Multiskilled Fibre Preparation and Spinning Operator → Production Team Leader → Production Supervisor.
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8. Classification

Australian Qualifications Framework	Level 2-3.
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 4.
Open Source Classification of Occupations for Australia (OSCA)	7314432 Textile or Footwear Production Machine Operator.



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