

SSNST05 Technical Textile Production Operator

1. Job role

TCF sub-sector	Natural and Synthetic Textile Manufacturing
Functional area	Technical Textile Production
Job role	SSNST05 Technical Textile Production Operator
Job role description	Operates, monitors and supports textile production systems used to manufacture technical and high-performance textile materials within the natural and synthetic textile manufacturing sector of the Textile, Clothing and Footwear (TCF) industry. This role is identified as a core occupation within the Technical Textile Production function of the Natural and Synthetic Textile Manufacturing Occupational Framework The Technical Textile Production Operator is a specialised production worker responsible for producing engineered textile materials designed for industrial, agricultural, medical, defence, filtration, transport, infrastructure, protective and performance applications. Unlike traditional fashion textile manufacturing roles, the Technical Textile Production Operator focuses on achieving functional performance characteristics including tensile strength, thermal resistance, filtration efficiency, flame retardancy, abrasion resistance, water resistance, dimensional stability, chemical resistance and specialised technical performance requirements. The role involves working with both natural fibres such as wool and cotton and synthetic materials including polyester, nylon, aramid, polypropylene, acrylic and advanced composite fibres. Operators may support weaving, knitting, nonwoven, coating, laminating, bonding, composite reinforcement, thermal treatment and specialised textile finishing systems. The position requires detailed understanding of technical fibre behaviour, textile construction, process control, coating systems, advanced finishing technologies, machine setup, quality monitoring and technical performance specifications. Operators work closely with textile technologists, production supervisors, quality personnel, maintenance technicians and process specialists to maintain production efficiency, minimise defects and ensure compliance with technical and customer standards. The role also contributes to process optimisation, troubleshooting, sustainability initiatives, advanced materials manufacturing and continuous improvement activities supporting Australia's technical textile manufacturing capability.

Performance expectations	- Producing technical textile materials that meet specialised functional and performance requirements - Operating advanced textile production machinery safely and efficiently - Maintaining production throughput, consistency and technical quality standards - Minimising production defects, contamination and material waste - Supporting effective machine setup, calibration and process control - Monitoring technical performance characteristics and production quality - Supporting compliance with operational, safety and regulatory procedures - Maintaining traceability and production documentation - Contributing to productivity, sustainability and continuous improvement initiatives
Specialisation	Technical textile manufacturing, high-performance textile systems, coated and laminated textiles, filtration textiles, protective materials, industrial textile production and advanced textile finishing
Application in other TCF sectors	Medical textiles, industrial textiles, filtration systems, defence textiles, automotive textiles, geotextiles, agricultural textiles, protective textiles, composites and advanced manufacturing

2. Key tasks and critical work functions

Key tasks	- Operating weaving, knitting, nonwoven and technical textile machinery - Preparing fibres, yarns, coatings and technical materials for production - Monitoring machine settings, process parameters and material performance - Supporting coating, lamination, bonding and specialised finishing operations - Identifying defects, contamination and process inconsistencies - Adjusting machine settings to maintain technical specifications and production efficiency - Performing routine cleaning, calibration and basic maintenance activities - Recording production, quality and traceability information - Following workplace safety, quality and operational procedures - Supporting production scheduling and workflow continuity
Critical work functions	- Ensuring technical textiles meet specialised functional and performance specifications - Maintaining structural integrity, dimensional stability and performance consistency - Preventing defects, contamination and process inefficiencies - Supporting efficient workflow across technical textile manufacturing operations - Maintaining safe operation of advanced textile production systems

	- Supporting compliance with technical, regulatory and customer standards - Maintaining traceability and documentation integrity - Contributing to operational reliability, sustainability and manufacturing capability development
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3. Technical skills

Technical textile production	Operating advanced textile manufacturing systems
Fibre and material knowledge	Understanding natural, synthetic and high-performance fibre behaviour
Machine setup and adjustment	Adjusting process parameters for technical textile production
Coating and finishing systems	Supporting advanced textile treatment and finishing operations
Technical quality control	Monitoring functional and performance characteristics
Process monitoring	Identifying faults and maintaining production continuity
Basic maintenance	Performing cleaning and routine machine servicing
Documentation and traceability	Maintaining production and quality records

4. Generic Skills

Attention to detail	Maintaining technical quality and production consistency
Communication	Working with supervisors, technicians and production teams
Problem solving	Resolving technical textile production and machinery issues
Teamwork	Supporting integrated textile manufacturing operations
Time management	Meeting production schedules and throughput targets
Adaptability	Working across multiple advanced textile production systems
Reliability	Maintaining consistent operational performance
Professionalism	Following operational, safety and quality standards

5. Emerging skills

Emerging skills	- Smart and responsive textile manufacturing systems - Sustainable technical textile production and recycled fibre integration - Advanced composite reinforcement and functional textile technologies - Industry 4.0 integration in technical textile manufacturing - Digital production analytics and predictive maintenance systems - Functional coatings, conductive textiles and advanced filtration 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 qualifications

7. Job progression

Possible job progression	Technical Textile Production Assistant → Technical Textile Production Operator → Senior Technical Textile Operator → Production Team Leader → Production Supervisor
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8. Classification

Australian Qualifications Framework	Level 3-4
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 3
Open Source Classification of Occupations for Australia (OSCA)	Technical Textile Production Operator - Natural and Synthetic Textile Manufacturing



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