

SSAPP28 Yarn Technologist

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	Apparel
Functional area	Product Design and Development
Job role	SSAPP28 Yarn Technologist
Job role description	Supports knitwear product design and development through specialist knowledge of yarns, fibres and knit structures. The Yarn Technologist evaluates yarn performance, recommends materials for knitwear products and works with designers, knit technicians and product developers to ensure yarn selection meets aesthetic, performance and manufacturing requirements.
Performance expectations	- Evaluate yarns and fibres for knitwear product development. - Recommend yarn specifications for garment performance and aesthetics. - Collaborate with knitwear designers and knit technicians. - Support development of innovative knit structures and fabrics. - Assess yarn durability, stretch, comfort and performance. - Coordinate yarn sourcing and testing. - Document yarn specifications and material data. - Support sustainable material selection and fibre innovation.
Specialisation	Technical evaluation and development of yarns used in knitwear production.
Application in other TCF sectors	- Textile fibre and yarn development. - Technical textile material engineering. - Performance apparel material development. - Industrial textile applications. - Footwear knit upper material development.

2. Key tasks and critical work functions

Key tasks	- Assess yarn properties including strength, elasticity and texture. - Recommend yarn types for garment designs. - Conduct yarn testing and performance evaluation.
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	• Collaborate with knitwear designers and product developers. • Support development of new knit structures. • Document yarn specifications and technical data. • Coordinate with yarn suppliers and manufacturers. • Support sustainable fibre sourcing initiatives.
Critical work functions	• Ensuring yarns meet garment performance requirements. • Supporting innovative knitwear product development. • Maintaining consistency of yarn quality across product ranges. • Ensuring yarn compatibility with knitting technologies. • Supporting sustainable material choices. • Contributing to efficient knitwear manufacturing.

3. Technical skills

Fibre science	Understand properties of natural and synthetic fibres.
Yarn construction	Analyse yarn structures and spinning methods.
Material testing	Evaluate yarn durability, elasticity and comfort.
Knit structure compatibility	Assess yarn suitability for knitting technologies.
Textile performance analysis	Interpret test data and performance characteristics.
Supplier collaboration	Work with yarn manufacturers and suppliers.
Material documentation	Maintain technical records of yarn specifications.
Sustainability knowledge	Evaluate sustainable fibres and materials.

4. Generic Skills

Analytical thinking	Evaluate material performance data.
Communication	Explain material performance to designers and technicians.
Collaboration	Work with product development and design teams.
Problem solving	Identify solutions for yarn or knit performance issues.
Attention to detail	Ensure accuracy of material specifications.
Innovation	Explore new fibres and yarn technologies.

5. Emerging skills

Emerging skills	• Advanced sustainable fibre technologies. • Recycled and bio-based yarn development. • Smart textiles and functional fibres. • Digital textile testing systems. • Material lifecycle analysis for sustainable products.
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6. VET Qualifications and Skill Sets

Entry-level preparation	No skill set or qualification.
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Advanced development	Bachelor's degree in Textile Technology, Fibre Science or Material Engineering.
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7. Job progression

Possible job progression	Textile Technician → Yarn Technologist → Senior Textile Technologist → Materials Innovation Manager
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8. Classification

Australian Qualifications Framework	AQF Level 5-7
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2
Open Source Classification of Occupations for Australia (OSCA)	311599 Science Technicians nec OSCA specialisation Fibre Technologist



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