

SSMTC03 Technical Designer – Textiles and Systems

1. Job role

TCF sub-sector	Cut and Sewn Products (Non-Garment)
Functional area	Product Design and Development
Job role	SSMTC03 Technical Designer – Textiles and Systems
Job role description	Provides technical design expertise across the development, engineering and production integration of cut and sewn non-garment textile products and systems within the Textile, Clothing and Footwear (TCF) industry. This role is identified within the Product Design and Development function of the occupational framework for cut and sewn products. The Technical Designer acts as the critical engineering and production bridge between conceptual design, customer requirements and industrial manufacturing processes. The role supports the development of technically complex non-garment cut and sewn products including upholstery systems, automotive interior components, technical textile assemblies, industrial covers, bags, transport interiors, furniture systems, shade structures, medical and protective textile systems, marine products and specialised fabricated soft goods. The Technical Designer is responsible for translating creative concepts, engineering requirements and customer specifications into manufacturable product systems and technical documentation suitable for industrial production. This includes developing technical specifications, construction details, material selections, seam and reinforcement strategies, dimensional tolerances, assembly methods and production instructions. The role focuses strongly on performance, durability, manufacturability, compliance and operational efficiency. The Technical Designer works closely with product development managers, design engineers, CAD technicians, pattern makers, production teams, quality specialists and suppliers to ensure products are technically feasible, commercially viable and aligned with customer expectations. The position also supports prototyping, testing, validation, process optimisation and continuous improvement activities to improve product functionality, production efficiency and lifecycle performance.
Performance expectations	Developing technically accurate and manufacturable product specifications

	• Ensuring alignment between design intent and industrial production capability • Supporting product performance, durability and compliance requirements • Producing clear technical documentation and construction details • Coordinating effectively with design, engineering and production teams • Supporting prototyping, testing and product validation activities • Minimising technical errors, defects and production inefficiencies • Supporting continuous improvement in products and manufacturing systems • Maintaining traceability and documentation integrity across product development activities
Specialisation	Technical product specification, textile systems design, construction detailing, industrial sewn product development, production integration, technical documentation and product optimisation
Application in other TCF sectors	Automotive interiors, upholstery systems, architectural textiles, defence products, marine fabrication, industrial textiles, transport systems, medical textiles and technical sewn products

2. Key tasks and critical work functions

Key tasks	• Translating conceptual and customer requirements into technical product specifications • Developing construction details, seam specifications and assembly instructions • Selecting appropriate fabrics, reinforcements, trims, foams and components • Producing technical packs, BOMs and production documentation • Supporting CAD development, pattern engineering and prototype activities • Coordinating product testing, fit evaluation and validation processes • Liaising with suppliers and production teams regarding manufacturability and materials • Supporting production troubleshooting and process optimisation • Reviewing compliance against customer, quality and safety requirements • Maintaining technical records, revisions and product traceability
Critical work functions	• Ensuring technical feasibility and manufacturability of products • Maintaining consistency between prototype and production outcomes • Supporting product durability, safety and functional performance • Preventing construction, specification and production errors

	- Supporting efficient workflow between development and manufacturing teams - Maintaining technical documentation accuracy and traceability - Supporting compliance with operational and customer requirements - Contributing to continuous improvement and innovation initiatives
--	---

3. Technical skills

Technical specification development	Producing technical packs, BOMs and construction details
Textile systems knowledge	Understanding materials, reinforcements and sewn product construction
Pattern and assembly integration	Supporting CAD, pattern engineering and production systems
Material selection	Specifying fabrics, foams, composites and trims
Seam engineering	Developing seam types, reinforcement systems and joining strategies
Prototype and validation support	Coordinating testing and technical evaluation
Standards compliance	Applying customer, safety and quality standards
Documentation management	Maintaining revision control and technical records

4. Generic Skills

Analytical thinking	Evaluating technical feasibility and production efficiency
Communication	Coordinating with technical, operational and customer teams
Problem solving	Resolving product and production issues
Teamwork	Working across multidisciplinary development environments
Time management	Managing development timelines and deliverables
Attention to detail	Maintaining specification accuracy and consistency
Adaptability	Responding to evolving customer and production requirements
Professionalism	Maintaining technical integrity and compliance standards

5. Emerging skills

Emerging skills	- Digital product lifecycle management systems 3D modelling and digital prototyping technologies - Smart textiles and integrated functional systems - Sustainable material specification and lifecycle analysis - Industry 4.0 integration with manufacturing systems - Automated documentation and digital workflow integration
-----------------	---

6. VET Qualifications and Skill Sets

Entry-level preparation	MST40122 Certificate IV in Textile Design and Technology or equivalent
Advanced development	Bachelor's degree in Textile Engineering, Industrial Design, Engineering, Product Development or Manufacturing Engineering

7. Job progression

Possible job progression	Technical Assistant → Technical Designer → Senior Technical Designer → Product Development Manager → Technical Director
--------------------------	---

8. Classification

Australian Qualifications Framework	Level 5-7
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 1-2
Open Source Classification of Occupations for Australia (OSCA)	Technical Designer - Textiles and Systems (Non-Garment TCF Sector)



Skills Insight is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations.