

SSCAR17 Sports Surface Systems Design and Testing Technician

1. Job role

TCF sub-sector	Carpet and Textile Floor Covering Manufacturing
Functional area	Artificial Grass [Synthetic Turf] Design, Manufacturing and Installation
Job role	SSCAR17 Sports Surface Systems Design and Testing Technician
Job role description	Designs, evaluates and tests synthetic turf systems to ensure they meet performance, safety and regulatory standards for sports and recreational applications. In the synthetic turf manufacturing sector, this role integrates materials, construction systems (fibres, backing, infill, shockpads) and installation methods to deliver compliant sports surfaces. The technician conducts laboratory and field testing to validate performance against standards such as FIFA, World Rugby and relevant Australian Standards. The role works closely with product development, quality, manufacturing and external stakeholders to ensure surfaces meet durability, safety and playability requirements across a range of sporting applications.
Performance expectations	• Designing turf systems that meet sport-specific performance requirements • Conducting accurate laboratory and field testing • Ensuring compliance with international and Australian standards • Analysing test results and identifying improvements • Supporting product certification and approval processes • Maintaining accurate documentation and reports • Minimising testing errors and inconsistencies • Supporting continuous improvement and innovation
Specialisation	FIFA quality systems, shock absorption testing, ball roll and bounce testing, traction and slip resistance, surface durability and wear testing
Application in other sectors	• Sports infrastructure and facility development • Construction and building materials testing • Automotive surface and material testing • Industrial materials engineering • Laboratory and certification environments

2. Key tasks and critical work functions

Key tasks	• Designing synthetic turf system configurations • Conducting lab and field performance tests • Preparing test samples and installations
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	• Measuring performance metrics (shock, traction, ball roll) • Recording and analysing test data • Preparing compliance and certification reports • Supporting product trials and development • Maintaining testing equipment and calibration
Critical work functions	• Ensuring surfaces meet safety and performance standards • Validating system design and construction • Maintaining accuracy and repeatability of tests • Supporting certification and compliance processes • Identifying performance issues and improvements • Supporting innovation in turf systems • Ensuring traceability and documentation integrity

3. Technical skills

Surface system design	Designing multi-layer turf systems
Standards-based testing	Applying FIFA, World Rugby and AS standards
Laboratory testing	Operating testing rigs and equipment
Field testing	Conducting on-site performance assessments
Data analysis	Interpreting test results and performance metrics
Materials knowledge	Understanding fibres, infill and backing systems
Equipment calibration	Maintaining testing accuracy
Documentation	Preparing technical reports and compliance records

4. Generic Skills

Analytical thinking	Evaluating complex system performance
Attention to detail	Ensuring testing accuracy
Problem solving	Identifying and resolving performance issues
Communication	Reporting findings to stakeholders
Time management	Managing testing schedules
Teamwork	Working with product and engineering teams
Adaptability	Responding to changing standards and requirements

5. Emerging skills

Emerging skills	• Advanced performance modelling and simulation • Smart surfaces and sensor integration • Data-driven performance analytics • Sustainable and recyclable turf systems • Integration with digital certification platforms • AI-assisted testing and predictive modelling
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6. VET Qualifications and Skill Sets

Entry-level preparation	MSL30122 Certificate III in Laboratory Skills or equivalent qualification in engineering, civil construction or manufacturing
Advanced development	MSL50122 Diploma of Laboratory Technology or equivalent qualification or bachelor's degree in engineering, sports surface technology, materials science or related field

7. Job progression

Possible job progression	Testing Technician → Systems Technician → Sports Surface Systems Design and Testing Technician → Senior Specialist → Technical Manager
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8. Classification

Australian Qualifications Framework	Level 4-6
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3
Open Source Classification of Occupations for Australia (OSCA)	Engineering / Testing Technician - Sports Surfaces



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