

**Specification of Competency Standards**  
**for the Testing, Inspection and Certification Industry**  
**Unit of Competency**

Functional Area - Testing Operations

Title	Perform fabric construction tests
Code	105856L4
Range	This unit of competency (UoC) covers the abilities to carry out suitable fabric construction tests on textile and garment products independently, record accurate test data and determine the fabric construction of the products in testing laboratories.
Level	4
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of fabric construction and related tests</p> <ul style="list-style-type: none"> <li>• Employ the principles of construction of fabric and the relation to the performance of fabric and yarn.</li> <li>• Employ the principles and methods of carrying out fabric construction tests, e.g. thread per unit length, stitch density, yarn count, denier count, fabric weight, fabric width, fabric thickness, loop length of knitted fabric, crimp of yarn in woven fabric, type of cut pile, type of weave, terry to ground ratio (length ratio).</li> <li>• Specify the requirements of fabric construction tests to selected type of textile and garment product.</li> <li>• Identify relevant fabric construction test standards and specifications, e.g.: <ul style="list-style-type: none"> <li>○ international and national standards such as AATCC, ASTM, ISO, EN, DIN, AS/NZS, CAN/CGSB, WOOLMARK, JIS, BS, GB, NF,</li> <li>○ manufacturers' and/or clients' specifications.</li> </ul> </li> <li>• Explain the principles and operation of equipment used for the fabric construction tests.</li> <li>• Apply the concepts of uncertainty and equipment calibration to the fabric construction tests.</li> </ul> <p>2. Perform fabric construction tests</p> <ul style="list-style-type: none"> <li>• Select appropriate test methods/standards, test plans, environmental conditions, and accessories for fabric construction tests.</li> <li>• Apply appropriate conditions to the testing equipment.</li> <li>• Prepare the required size and number of sample.</li> <li>• Carry out fabric construction tests on the sample independently according to the test methods/standards.</li> <li>• Carry out required validation checks to confirm the environmental and equipment requirements are met.</li> <li>• Record accurate test data and judge test results to confirm the fabric construction performance of the test sample in compliance with the required specifications.</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Ensure all tests are carried out in compliance with good laboratory practices under relevant categories of standards.</li> <li>• Ensure integrity and confidentiality of laboratory data and information by observing the code of conduct as required by the standards and the organisation.</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• carry out fabric construction tests on selected textile and garment product independently by applying appropriate testing equipment and environmental conditions according to the requirements of test methods/standards,</li> <li>• record accurate and reliable test data by data validation and verifying equipment calibration status,</li> </ul>

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	<ul style="list-style-type: none"><li>• judge test results to confirm the compliance of fabric construction performance of the product against the relevant specifications of test methods/standards and/or manufacturers/clients.</li></ul>
Remark	