#### RPL Clusters for Testing, Inspection and Certification Industry

	RPL Cluster (Name & Code)	QF Level	UoC Codes	Unit of Competency	Years of Working Experiences and Relevant experiences	Proposed Form of Assessment and Fee
1	Measurement Uncertainty (Chemical Testing) (TCTE001L4)	4	105768L4 105871L4	Estimate and report measurement uncertainty Apply statistical calculations to measurement data	Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Written Test + Interview (\$1200)
2	Measurement Uncertainty (Microbiological Testing) (TCTE002L4)	4	105768L4 105871L4	Estimate and report measurement uncertainty Apply statistical calculations to measurement data	field) Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related field)	Written Test + Interview (\$1200)
3	Measurement Uncertainty (Physical Testing) (TCTE003L4)	4	105768L4 105871L4	Estimate and report measurement uncertainty Apply statistical calculations to measurement data	Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience	Written Test + Interview (\$1200)

					in related field)	
4	Sample Handling	3	105777L3	Pre-condition test samples	Five years' relevant	Written Test +
	(TCTE004L3)	3	105778L3	Handle and transport samples	experience in Testing,	Interview (\$1200)
		3 105986L3 Pr	Prepare samples for testing	Inspection and Certification Industry (including two years of experience in related field)		
5	Sampling and Sample Handling (TCTE005L4)	4	105772L4	Obtain representative samples in accordance with sampling plan	Six years' relevant experience in Testing, Inspection	Written Test + Interview (\$1200)
		4	105773L4	Apply statistical techniques in sampling	and Certification Industry	
		4	105775L4	Establish procedures for handling of test / inspection items and samples	(including three years of	
6	Basic Laboratory Preparation	2	105774L2	Collect routine site samples	Three years' relevant	Interview (\$890)
	Work (TCTE006L2)	2 2	105776L2 105987L2	Receive samples Conduct laboratory / field work	experience in Testing, Inspection	(4 2 2 3)
		2	105988L2	Maintain laboratory / workplace fit for purpose	and Certification Industry (including	
		2	105799L2	Apply cleansing methods for labware	one year of experience in related field)	
7	Basic Microbiological	2	105774L2	Collect routine site samples	Three years' relevant experience in Testing, Inspection and Certification	Interview (\$890)
	Laboratory Preparation	2 2	105776L2 105987L2	Receive samples Conduct laboratory		
	Work (TCTE007L2)	2	105988L2	/ field work  Maintain laboratory /		

emical Testing emental alysis — omic ectrometric chniques) CTE009L4)	3 3 4 4 4 4	105798L3  105973L3  105873L3  105785L4  105790L4  105872L4 105871L4  105971L4  105873L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex tests to measure chemical properties of materials Process data Apply statistical calculations to measurement data Handle and dispose of chemical wastes Record and present	Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related field)  Six years'	Practical Assessment + Written Test (\$5200)
emental alysis – omic ectrometric chniques)	3 4 4 4	105973L3 105873L3 105785L4 105790L4 105872L4 105871L4	equipment and facilities for chemical testing  Handle chemicals, solutions and reagents  Maintain laboratory / field workplace safety  Record and present data  Apply atomic spectrometric techniques to chemical testing  Perform complex tests to measure chemical properties of materials  Process data  Apply statistical calculations to measurement data  Handle and dispose	relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4 4	105973L3 105873L3 105785L4 105790L4 105872L4 105871L4	equipment and facilities for chemical testing  Handle chemicals, solutions and reagents  Maintain laboratory / field workplace safety  Record and present data  Apply atomic spectrometric techniques to chemical testing  Perform complex tests to measure chemical properties of materials  Process data  Apply statistical calculations to measurement data	relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4 4	105973L3 105873L3 105785L4 105790L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex tests to measure chemical properties of materials Process data Apply statistical	relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4 4	105973L3 105873L3 105785L4 105790L4	equipment and facilities for chemical testing  Handle chemicals, solutions and reagents  Maintain laboratory / field workplace safety  Record and present data  Apply atomic spectrometric techniques to chemical testing  Perform complex tests to measure chemical properties of materials Process data	relevant experience in Testing, Inspection and Certification Industry (including three years of experience	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4	105973L3 105873L3 105785L4 105790L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex tests to measure chemical properties of materials	relevant experience in Testing, Inspection and Certification Industry (including three years of	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4	105973L3 105873L3 105785L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex tests to measure chemical properties of	relevant experience in Testing, Inspection and Certification Industry (including three years	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4	105973L3 105873L3 105785L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex tests to measure	relevant experience in Testing, Inspection and Certification Industry	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4	105973L3 105873L3 105785L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing Perform complex	relevant experience in Testing, Inspection and Certification	Assessment + Written Test
emental alysis – omic ectrometric chniques)	3 4	105973L3 105873L3 105785L4	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to chemical testing	relevant experience in Testing, Inspection and	Assessment + Written Test
emental alysis – omic ectrometric	3	105973L3 105873L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric techniques to	relevant experience in Testing, Inspection	Assessment + Written Test
emental alysis – omic	3	105973L3 105873L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic spectrometric	relevant experience in Testing,	Assessment + Written Test
emental alysis –	3	105973L3 105873L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data Apply atomic	relevant experience	Assessment + Written
emental	3	105973L3 105873L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present data	relevant	Assessment
	3	105973L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety Record and present		
	3	105973L3	equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain laboratory / field workplace safety		
			equipment and facilities for chemical testing Handle chemicals, solutions and reagents Maintain		
			equipment and facilities for chemical testing  Handle chemicals, solutions and reagents		
	3	105798L3	equipment and facilities for chemical testing  Handle chemicals, solutions and		
	3	105798L3	equipment and facilities for chemical testing Handle chemicals,		
	3	1057981 3	equipment and facilities for chemical testing		
			equipment and facilities for		
			equipment and		
			· · · · · · · · · · · · · · · · · · ·		
			materials,	i	1
	3	105797L3	Prepare laboratory	field)	
			reagents	in related	
			solutions and	experience	
	3	105796L3	Prepare working	two years of	
			solutions	(including	
	3	105795L3	Prepare standard	Industry	
			chemical testing	Certification	
			treatment techniques to	Inspection and	
CTE008L3)	3	105794L3	Apply sample	in Testing,	(\$3500)
alysis)	2	1057041.2	procedures	experience	+ Interview
emental			chemical tests and	relevant	Assessment
emical Testing	3	105791L3		Five years'	Practical
			testing labware	field)	
			microbiological	in related	
			methods for	experience	
	2	105992L2			
				-	
emi	cal Testing			methods for microbiological testing labware  cal Testing 3 105791L3 Perform basic	purpose (including 2 105992L2 Apply cleansing one year of methods for experience microbiological in related testing labware field) cal Testing 3 105791L3 Perform basic Five years'

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	Analysis –	4	105786L4	Apply inductively	experience	+ Written
	Inductively Coupled Plasma Spectroscopic Techniques) (TCTE010L4)			coupled plasma	in Testing,	Test
				spectroscopic	Inspection	(\$5200)
				techniques to	and	
				chemical testing	Certification	
		4	105790L4	Perform complex	Industry	
				tests to measure	(including	
				chemical	three years	
				properties of	of .	
				materials	experience	
		4	105872L4	Process data	in related	
		4	105871L4	Apply statistical	field)	
				calculations to		
				measurement data		
		4	105971L4	Handle and dispose		
				of chemical waste		
11	Chemical Testing	3	105791L3	Perform basic	Five years'	Practical
	(Organic			chemical tests and	relevant	Assessment
	Analysis)			procedures	experience	+ Interview
	(TCTE011L3)	3	105792L3	Apply separation	in Testing,	(\$3500)
				and cleanup	Inspection	
				techniques to	and	
				organic analysis	Certification	
		3	105793L3	Apply extraction	Industry	
				techniques to	(including	
				organic analysis	two years of	
		3	105795L3	Prepare standard	experience	
				solutions	in related	
		3	105796L3	Prepare working	field)	
				solutions and		
				reagents		
		3	105797L3	Prepare laboratory		
				materials,		
				equipment and		
				facilities for		
				chemical testing		
		3	105973L3	Maintain		
				laboratory / field		
				workplace safety		
		3	105798L3	Handle chemicals,		
				solutions and		
				reagents		
12	Chemical Testing	3	105873L3	Record and present	Six years'	Practical
	(Organic			data	relevant	Assessment
	Analysis –	4	105871L4	Apply statistical	experience	+ Written
	Chromatographic			calculations to	in Testing,	Test
	Techniques)			measurement data	Inspection	(\$5200)
	(TCTE012L4)	4	105784L4	Apply	and	, , ,
	,			chromatographic	Certification	
		I	L		<u> </u>	

15	Biological / Microbiological	3	105873L3	and facilities for biological / microbiological testing  Record and present data	Six years' relevant	Practical Assessment
15	D: 1			and facilities for biological / microbiological testing	G.	D. C. I
		3		and facilities for biological /		
			105811L3	Prepare equipment		1
		3	105810L3	Follow bio-safety rules and precautions	field)	
				media and solutions	two years of experience in related	
		3	105809L3	sterilisation and aseptic techniques Prepare culture	Certification Industry (including	
	Preparation (TCTE014L3)	3	105808L3	microbiological samples Perform	Inspection and	(\$3300)
	Microbiological Testing Preparation	3	105807L3	samples Prepare	relevant experience in Testing,	Assessment + Interview (\$3500)
14	Biological /	3	105806L3	Prepare biological	Five years'	Practical
L		4	105872L4	Process data		
		4	105971L4	Handle and dispose of chemical wastes		
				tests to measure chemical properties of materials	experience in related field)	
		4	105790L4	Perform complex	three years of	
				chemical testing	(including	
	(TCTE013L4)			spectrometric techniques to	Certification Industry	
	Techniques)	4	105787L4	Apply molecular	and	
	Spectrometric			measurement data	Inspection	(\$5200)
	Analysis – Molecular	4	105871L4	Apply statistical calculations to	experience in Testing,	+ Written Test
	(Organic	1	1050711 4	data	relevant	Assessment
13	Chemical Testing	3	105873L3	Record and present	Six years'	Practical
		4	105872L4	Process data		
		4	105971L4	Handle and dispose of chemical wastes		
				materials	field)	
					in related	
		4	105790L4		•	
				chemical testing	(including	
		4	105790L4	techniques to chemical testing  Perform complex tests to measure chemical properties of	three years of experience	

	Testing	4	105802L4	Perform	experience	+ Written
	(TCTE015L4)		10300221	microbiological	in Testing,	Test
	,			tests	Inspection	(\$5200)
		4	105803L4	Perform biological	and	
				and biochemical	Certification	
				tests	Industry	
		4	105804L4	Perform	(including	
				microscopic	three years	
			1070077	examination	of .	
		4	105805L4	Perform staining	experience in related	
		4	1050711 4	techniques	field)	
		4	105871L4	Apply statistical calculations to	neiu)	
				measurement data		
		4	105872L4	Process data		
16	Environmental	3	105873L3	Record and present	Six years'	Practical
10	Testing	3	103073L3	data	relevant	Assessment
	(Microbiological)	4	105814L4	Perform	experience	+ Written
	(TCTE016L4)		10001121	environmental	in Testing,	Test
	,			testing	Inspection	(\$5200)
				(microbiological)	and	
		4	105802L4	Perform	Certification	
				microbiological	Industry	
				tests	(including	
		4	105804L4	Perform	three years	
				microscopic	of .	
				examination	experience	
		4	105805L4	Perform staining	in related	
		4	1050701 4	techniques	field)	
		4	105872L4	Process data		
		4	105871L4	Apply statistical		
				calculations to measurement data		
17	Environmental	3	105873L3	Record and present	Six years'	Practical
1/	Testing	3	10307313	data	relevant	Assessment
	(Physical)	4	105815L4	Perform	experience	+ Written
	(TCTE017L4)			environmental	in Testing,	Test
				testing (physical)	Inspection	(\$5200)
		4	105872L4	Process data	and	
		4	105871L4	Apply statistical	Certification	
				calculations to	Industry	
				measurement data	(including	
					three years	
					of .	
					experience	
					in related	
					field)	

18	Physical and Mechanical Testing (On-site Concrete Sampling and Testing) (TCTE052L3)	3 3 4	105846L3 105973L3 105873L3 105961L4	Perform sampling and basic field tests on fresh concrete and onsite curing on concrete cubes  Maintain laboratory / field workplace safety  Record and present data  Implement ethical	Five years' relevant experience in Testing, Inspection and Certification Industry (including two years of experience in related	Practical Assessment + Interview (\$3500)
	Physical and	3	105837L3 105845L3	practices  Perform physical and mechanical tests on concrete and its constituent materials  Perform basic	field) Five years' relevant experience in Testing, Inspection and	
19	Mechanical Testing (Concrete and Its Constituent Materials)	3	105973L3	physical and mechanical tests  Maintain laboratory / field workplace safety	Certification Industry (including two years of experience in related field)	Practical Assessment + Interview (\$3500)
	(TCTE053L3)	3	105873L3 105961L4	Record and present data  Implement ethical practices		
	Physical and Mechanical Testing (Mortar and Grout)	3	105839L3	Perform physical and mechanical tests on mortar and grout	Five years' relevant experience in Testing,	
20	(TCTE054L3)	3	105845L3	Perform basic physical and mechanical tests	Inspection and Certification Industry	Practical Assessment
		3	105973L3	Maintain laboratory / field workplace safety	(including two years of experience in related	+ Interview (\$3500)
		3	105873L3	Record and present data	field)	

		4	105961L4	Implement ethical practices		
		3	105873L3	Record and present data	Six years' relevant	
		4	105872L4	Process data	experience in Testing,	
	Physical and	4	105835L4	Perform basic physical and mechanical tests on soil and rock	Inspection and Certification Industry (including	Practical
21	Mechanical Testing (Soil and Rock) (TCTE055L4)	3	105845L3	Perform basic physical and mechanical tests	of experience in related	Assessment + Interview (\$5200)
		3	105973L3	Maintain laboratory/field workplace safety	field)	
		4	105961L4	Implement ethical practices		
		3	105873L3	Record and present data	Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Practical Assessment
		4	105872L4	Process data		+ Interview (\$5200)
22	Physical and Mechanical Testing (Bituminous Materials)	4	105838L4	Perform physical and mechanical tests on bituminous materials		
	(TCTE056L4)	3	105973L3	Maintain laboratory/field workplace safety		
		4	105961L4	Implement ethical practices	field)	
	Physical and Mechanical	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Testing (Basic Structural	4	105872L4	Process data	experience in Testing, Inspection and Certification Industry (including	+ Interview (\$5200)
Dia on Cor Stru	Diagnostic Tests	4	105842L4	Perform basic structural diagnostic tests on concrete structures		

		3	105973L3	Maintain laboratory/field workplace safety	three years of experience in related	
		4	105961L4	Implement ethical practices	field)	
		3	105791L3	Perform basic chemical tests and procedures	SIX years' relevant experience	Practical Assessment + Written Test (\$5200)
		3	105845L3	Perform basic physical and mechanical tests	in TIC industry (including THREE	
		3	105873L3	Record and present data	years' of experience in related field)	
		3	105973L3	Maintain laboratory/field workplace safety		
24	Chemical Testing on Construction Materials (TCTE058L4)	4	105788L4	Perform chemical tests on construction materials		
		4	105871L4	Apply statistical calculations to measurement data		
		4	105872L4	Process data		
		4	105961L4	Implement ethical practices		
		4	105971L4	Handle and dispose of chemical wastes		
	Physical and Mechanical	3	105873L3	Record and present data	Six years' relevant experience in Testing, Inspection and Certification Industry (including	Practical Assessment + Written Test (\$5200)
25	Testing (Toys and Hardlines -	4	105872L4	Process data		
r	Flammability Tests ) (TCTE025L4)	4	105871L4	Apply statistical calculations to measurement data		

		4	105851L4	Perform flammability tests (toys and hardlines)	three years of experience in related field)	
		3	105873L3	Record and present data	Six years' relevant	
		4	105872L4	Process data	experience	
26	Physical and Mechanical Testing (Toys and Hardlines –	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and Certification	Practical Assessment + Written
20	26 and Hardlines – Stability and Construction) (TCTE026L4)	4	105852L4	Perform stability, physical and mechanical tests	Industry (including three years of experience in related field)	Test (\$5200)
		4	105853L4	Evaluate the construction of products by visual inspection (consumer products)		
27	Physical and Mechanical	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Testing (Toys –	4	105872L4	Process data	experience	+ Written
	Acoustic	4	105872L4 105871L4		in Testing,	Test
	Measurement) (TCTE027L4)	4	1038/1124	Apply statistical calculations to measurement data	Inspection and Certification Industry (including three years of experience in related field)	(\$5200)
	(TCTE027L4)	4	105854L4	Perform acoustic measurements (consumer products)		
28	Fabric	3	105873L3	Record and present	Six years'	Practical
	Construction	1	1050701 4	data	relevant	Assessment
	Tests (Textiles and Garment Products) (TCTE028L4)	4	105872L4	Process data	experience in Testing	+ Written Test
		4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	(\$5200)
	,	4	105856L4	Perform fabric construction tests	Certification Industry (including three years	

		T	1	1	C	
					of experience in related field)	
29	Fabric Strength and Performance	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Tests (Textiles	4	105872L4	Process data	experience	+ Written
	and Garment Products) (TCTE029L4)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and Certification Industry (including three years of experience in related field)	Test (\$5200)
	(ICILOZ)LT)	4	105857L4	Perform fabric strength and performance tests		
30	Care Performance	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Tests (Textiles	4	105872L4	Process data	experience in Testing, Inspection and	+ Written
	and Garment Products)	4	105871L4	Apply statistical calculations to measurement data		Test (\$5200)
	(TCTE030L4)	4	105859L4	Perform care performance tests	Certification Industry (including three years of experience in related field)	
31	Colour Fastness	3	105873L3	Record and present	Six years'	Practical
	Tests (Textiles			data	relevant	Assessment
	and Garment	4	105872L4	Process data	experience	+ Written
	Products) (TCTE031L4)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
		4	105860L4	Perform colour fastness tests	Certification Industry (including three years of experience in related field)	
32	Flammability Tests (Textiles	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
		4	105872L4	Process data	experience	+ Written

	and Garment Products)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
	(TCTE032L4)	4	105861L4	Perform flammability tests (textiles and garments)	Certification Industry (including three years of experience in related field)	
33	Fibre Analysis (Textiles and	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Garment	4	105872L4	Process data	experience	+ Written
	Products) (TCTE033L4)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
		4	105858L4	Perform fibre analysis	Certification Industry (including three years of experience in related field)	
34	Garment Trim Tests (Textiles	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	and Garment	4	105872L4	Process data	experience	+ Written
	Products) (TCTE034L4)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection	Test (\$5200)
	(TOTEOS IET)	4	105863L4	Perform garment trim tests	Certification Industry (including three years of experience in related field)	
35	Feather and Down Analysis	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	(TCTE035L4)	4	105872L4	Process data	experience	+ Written
	, ,	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
		4	105862L4	Perform feather and down analysis	Certification Industry (including three years of	

36	Performance Tests (Footwear) (TCTE036L4)	3 4 4	105873L3 105872L4 105871L4 105864L4	Record and present data Process data Apply statistical calculations to measurement data Perform footwear tests	experience in related field) Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related	Practical Assessment + Written Test (\$5200)
37	Electrical and Electronic Safety Testing (Electric Shock and Energy Hazard Tests)  (TCTE037L4)	3 4 4 4	105873L3 105872L4 105871L4 105820L4	Record and present data Process data Apply statistical calculations to measurement data Perform electric shock and energy hazard tests	field) Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related field)	Practical Assessment + Written Test (\$5200)
38	Electrical and Electronic Safety Testing (Electrical Insulation Tests) (TCTE038L4)	4	105873L3 105872L4 105871L4 105821L4 105822L4	Record and present data Process data Apply statistical calculations to measurement data Evaluate electrical insulation properties by electrical measurements Evaluate electrical insulation properties by physical measurements	Six years' relevant experience in Testing, Inspection and Certification Industry (including three years of experience in related field)	Practical Assessment + Written Test (\$5200)
39	Electrical and Electronic Safety Testing	3	105873L3 105872L4	Record and present data Process data	Six years' relevant experience	Practical Assessment + Written

	(Electrical Products – Construction	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
	Evaluation) (TCTE039L4)	4	105848L4	Evaluate the construction of products by visual inspection (electrical products)	Certification Industry (including three years of experience in related field)	
40	Electrical and Electronic Safety	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Testing (Thermal	4	105872L4	Process data	experience	+ Written
	Hazard and Flammability Tests)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
	(TCTE040L4)	4	105825L4	Perform thermal hazard related tests	Certification Industry	
		4	105826L4	Perform flammability tests (electrical and electronic products)	(including three years of experience in related field)	
41	Electrical and Electronic Safety	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Testing (Stability	4	105872L4	Process data	experience	+ Written
	and Mechanical Tests) (TCTE041L4)	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
		4	105847L4	Perform stability and mechanical tests	Certification Industry (including three years of experience in related field)	
42	Physical and Mechanical	3	105873L3	Record and present data	Six years' relevant	Practical Assessment
	Testing	4	105872L4	Process data	experience	+ Written
	(Electrical Products – Acoustic	4	105871L4	Apply statistical calculations to measurement data	in Testing, Inspection and	Test (\$5200)
	Measurement) (TCTE042L4)	4	105849L4	Perform acoustic Measurements (electrical products)	Certification Industry (including three years of	

43	Electrical and Electronic Testing (Energy Efficiency) (TCTE043L4)	3 4 4 4	105873L3 105823L4 105872L4 105871L4	Record and present data Evaluate energy efficiency of electrical and electronic products Process data Apply statistical calculations to	experience in related field) Six years' relevant experience in Testing, Inspection and Certification Industry (including	Practical Assessment + Written Test (\$5200)
				measurement data	three years of experience in related field)	
44	Testing Quality Assurance	4	105878L4	Implement laboratory quality control procedures	Six years' relevant experience	Written Test + Interview
	(TCTE044L4)	4	105879L4	Control reference materials and working standards	in Testing, Inspection and	(\$1200)
		4	105880L4	Verify critical consumables	Certification Industry	
		4	105904L4	Implement corrective actions for testing services	(including three years of	
		4	105905L4	Implement preventive actions for testing services	experience in related field)	
45	Measurement Traceability (Chemical	4	105890L4	Verify and maintain reference materials	Six years' relevant experience	Written Test + Interview
	Testing) (TCTE045L4)	4	105892L4	Handle and perform equipment calibration	in Testing, Inspection and Certification Industry (including three years of experience in related field)	(\$1200)
46	Measurement Traceability	4	105891L4	Verify and maintain reference and working cultures	Six years' relevant experience in Testing,	Written Test + Interview (\$1200)

	(Microbiological Testing) (TCTE046L4)	4	105892L4	Handle and perform equipment calibration	Inspection and Certification Industry (including three years of experience in related field)	
47	Measurement Traceability (Physical	4	105889L4	Calibrate and maintain reference standards	Six years' relevant experience	Written Test + Interview
	Testing) (TCTE047L4)	4	105892L4	Handle and perform equipment calibration	in Testing, Inspection and Certification Industry (including three years of experience in related field)	(\$1200)
48	Inspection of Consumer Products	3	105914L3	Prepare work documents for conducting inspection	Six years' relevant experience in Testing,	Written Test + Interview (\$1200)
	(TCIN048L4)	3	105919L3	Record inspection observations and findings	Inspection and Certification	
		4	105911L4	Identify equipment and resources requirement for conducting inspection	Industry (including three years of experience	
		4	105912L4	Identify items and samples for inspection	in related field)	
		4	105913L4	Define defect classification and acceptance criteria		
		4	105916L4	Perform on-site inspection of production processes / delivery of services		
		4	105917L4	Inspect items and samples		

		4	105918L4	Perform compliance inspection on materials		
49	Inspection of Waterworks Products	3	105914L3	Prepare work documents for conducting inspection	Six years' relevant experience in Testing,	Written Test + Interview (\$1200)
	(TCIN049L4)	3	105919L3	Record inspection observations and findings	Inspection and Certification	
		4	105911L4	Identify equipment and resources requirement for conducting inspection	Industry (including three years of experience	
		4	105912L4	Identify items and samples for inspection	in related field)	
		4	105913L4	Define defect classification and acceptance criteria		
		4	105916L4	Perform on-site inspection of production processes / delivery of services		
		4	105917L4	Inspect items and samples		
		4	105918L4	Perform compliance inspection on materials		
50	Quality Assurance of Inspection	4	105921L4	Implement inspection quality control procedures	Six years' relevant experience	Written Test + Interview
	Operation (TCIN050L4)	4	105930L4	Implement corrective actions and preventive actions for inspection services	in Testing, Inspection and Certification Industry (including three years of experience in related field)	(\$1200)

51	Occupational	4	105964L4	Monitor	Six years'	Written
	Safety and			environmentally	relevant	Test +
	Health			sustainable work	experience	Interview
				practices	in Testing,	(\$1200)
	(TCOM051L4)	4	105969L4	Implement	Inspection	
				occupational safety	and	
				and health	Certification	
				supervision	Industry	
		4	105970L4	Monitor	(including	
				occupational safety	three years	
				and health system	of	
		4	105972L4	Identify hazards	experience	
				associated with	in related	
				testing / inspection	field)	
				/ certification		
				activities		
52	Physical and	3	105845L3	Perform basic	SIX years'	Practical
	Mechanical			physical and	relevant	Assessment
	Testing (Steel)			mechanical tests	experience	+ Interview
	(TCTE059L4)	3	105873L3	Record and present	in TIC	(\$5200)
				data	industry	
		3	105973L3	Maintain	(including	
				laboratory / field	THREE	
				workplace safety	years' of	
		4	105836L4	Perform physical	experience	
				and mechanical	in related	
				tests on steel	field)	
		4	105872L4	Process data		
		4	105961L4	Implement ethical		
				practices		

## Laboratory / On-site Testing

#### **Testing Operations: Measurement Uncertainty**

1. Measurement Uncertainty (Chemical Testing) (Level 4)			
Major Competency Standards	Estimate and report measurement uncertainty of chemical test method according to the predetermined procedures.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105768L4	Estimate and report measurement uncertainty	
	105871L4	Apply statistical calculations to measurement data	

2. Measurement Uncertainty (Microbiological Testing) (Level 4)				
Major Competency Standards	Estimate and report measurement uncertainty of microbiological test method according to the predetermined procedures.			
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)			
Units of Competency	105768L4	Estimate and report measurement uncertainty		
	105871L4	Apply statistical calculations to measurement data		

3. Measurement Uncertainty (Physical Testing) (Level 4)			
Major Competency Standards	Estimate and report measurement uncertainty of physical test method according to the predetermined procedures.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105768L4	Estimate and report measurement uncertainty	
	105871L4	Apply statistical calculations to measurement data	

#### Laboratory / On-site Testing -Testing Operations: Sampling and Sample Handling

4. Sample H	1. Sample Handling (Level 3)				
Major Competency Standards	Perform pre-condition, handling and transport of samples in accordance with the standard operating procedures.				
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)				
	105777L3	Pre-condition test samples			
Units of	105778L3	Handle and transport samples			
Competency	105986L3	Prepare samples for testing			
	105836L4 Perform physical and mechanical tests on steel				
	105872L4	Process data			
	105961L4	Implement ethical practices			

5. Sampling and Sample Handling (Level 4)			
Major Competency Standards	Obtain representative samples by applying statistics techniques in sampling and establish procedures for proper and safe handling of test items.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
	105772L4	Obtain representative samples in accordance with sampling plan	
Units of Competency	105773L4	Apply statistical techniques in sampling	
	105775L4	Establish procedures for handling of test / inspection items and samples	

#### Laboratory / On-site Testing -Testing Operations: Preparation Work

6. Basic Laboratory Preparation Work (Level 2)				
Major Competency Standards	Carry out basic preparation work in a laboratory for general testing operations.			
Years of Work Experience and Related Job Experience	THREE years' relevant experience in TIC industry (including ONE year's of experience in related field)			
	105774L2	Collect routine site samples		
	105776L2	Receive samples		
Units of Competency	105987L2	Conduct laboratory / field work		
	105988L2	Maintain laboratory / workplace fit for purpose		
	105799L2	Apply cleansing methods for labware		

7. Basic Microbiological Laboratory Preparation Work (Level 2)		
Major Competency Standards	Carry out basic preparation work in a laboratory for biological / microbiological testing operations.	
Years of Work Experience and Related Job Experience	THREE years' relevant experience in TIC industry (including ONE year's of experience in related field)	
	105774L2	Collect routine site samples
Units of Competency	105776L2	Receive samples
	105987L2	Conduct laboratory / field work
	105988L2	Maintain laboratory / workplace fit for purpose
	105992L2	Apply cleansing methods for microbiological testing labware

#### Laboratory / On-site Testing -Testing Operations: Chemical Testing (Elemental Analysis)

8. Chemical Testing (Elemental Analysis) (Level 3)		
Major Competency Standards	Prepare standard and working solutions, samples and facilities / equipment for elemental analysis; conduct tests and carry out procedures for chemical testing safely in a laboratory.	
Years of Work Experience	FIVE years' relevant experience in TIC industry	
and Related Job Experience	(including TWC	years' of experience in related field)
Units of Competency	Perform basic chemical tests and procedures	
	105794L3	Apply sample treatment techniques to chemical testing
	105795L3	Prepare standard solutions
	105796L3	Prepare working solutions and reagents
	105797L3	Prepare laboratory materials, equipment and facilities for chemical testing
	105798L3	Handle chemicals, solutions and reagents
	105973L3	Maintain laboratory / field workplace safety

9. Chemical Testing (Elemental Analysis – Atomic Spectrometric Techniques) (Level 4)		
Major Competency Standards	Apply atomic spectrometric techniques to carry out elemental analysis in a chemical testing laboratory.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105785L4	Apply atomic spectrometric techniques to chemical testing
	Perform complex tests to measure chemical properties of materials	
	105872L4 Process data	
	105871L4	Apply statistical calculations to measurement data
	105971L4	Handle and dispose of chemical wastes

10. Chemical Testing (Elemental Analysis – Inductively Coupled Plasma Spectroscopic Techniques) (Level 4)		
Major Competency Standards	Apply inductively coupled plasma spectroscopic techniques to carry out elemental analysis in a chemical testing laboratory.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105786L4	Apply inductively coupled plasma spectroscopic techniques to chemical testing
	105790L4	Perform complex tests to measure chemical properties of materials
	105872L4 Process data	
	105871L4	Apply statistical calculations to measurement data
	105971L4	Handle and dispose of chemical wastes

#### Laboratory / On-site Testing -Testing Operations: Chemical Testing (Organic Analysis)

11. Chemical Testing (Organic Analysis) (Level 3)		
Major Competency Standards	Prepare standard and working solutions, samples and facilities / equipment for organic analysis; conduct tests and carry out procedures for chemical testing safely in a laboratory.	
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)	
Units of Competency	105791L3 Perform basic chemical tests and procedures	
	105792L3	Apply separation and cleanup techniques to organic analysis
	105793L3	Apply extraction techniques to organic analysis
	105795L3 Prepare standard solutions	
	105796L3	Prepare working solutions and reagents
	105797L3	Prepare laboratory materials, equipment and facilities for chemical testing
	105973L3	Maintain laboratory / field workplace safety
	105798L3 Handle chemicals, solutions and reagents	

12. Chemical Testing (Orga	12. Chemical Testing (Organic Analysis – Chromatographic Techniques) (Level 4)		
Major	Apply chromatographic techniques to carry out organic analysis		
Competency Standards	in a chemical te	sting laboratory.	
Years of Work Experience		ant experience in TIC industry	
and Related Job Experience	(including THR	EE years' of experience in related field)	
Units of Competency	105873L3 Record and present data		
	105871L4	Apply statistical calculations to measurement data	
	105784L4	Apply chromatographic techniques to chemical testing	
	105790L4	Perform complex tests to measure chemical properties of materials	
	105971L4	Handle and dispose of chemical wastes	
	105872L4 Process data		

13. Chemical Testing (Orga 4)	anic Analysis – Mo	lecular Spectrometric Techniques) (Level
Major Competency Standards	Apply molecular spectrometric techniques to carry out organic analysis in a chemical testing laboratory.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105871L4	Apply statistical calculations to measurement data
	105787L4	Apply molecular spectrometric techniques to chemical testing
	105790L4	Perform complex tests to measure chemical properties of materials
	105971L4	Handle and dispose of chemical wastes
	105872L4	Process data

#### Laboratory / On-site Testing -Testing Operations: Biological / Microbiological Testing

14. Biological / Microbiological Testing Preparation (Level 3)		
Major Competency Standards	Prepare culture media and solutions, samples and facilities / equipment for biological / microbiological testing; perform sterilisation and aseptic techniques safely in a laboratory.	
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)	
Units of Competency	105806L3 Prepare biological samples	
	105807L3	Prepare microbiological samples
	105808L3 Perform sterilisation and aseptic techniqu	
	105809L3	Prepare culture media and solutions
	105810L3	Follow bio-safety rules and precautions
	105811L3	Prepare equipment and facilities for biological / microbiological testing

15. Biological / Microbiological Testing (Level 4)		
Major Competency Standards	Perform microbiological tests, biological and biochemical tests as well as microscopic examination in a biological / microbiological testing laboratory.	
Years of Work Experience	SIX years' relevant experience in TIC industry	
and Related Job Experience	(including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105802L4	Perform microbiological tests
	105803L4	Perform biological and biochemical tests
	105804L4	Perform microscopic examination
	105805L4	Perform staining techniques
	105871L4	Apply statistical calculations to measurement data
	105872L4 Process data	

# **Laboratory / On-site Testing - Testing Operations:**

## **Environmental Testing**

16. Environmental Testing (Microbiological) (Level 4)		
Major Competency Standards	Carry out microbiological tests on environmental samples independently and record accurate test data to evaluate the compliance of environmental samples against relevant regulatory limits.	
Years of Work Experience	SIX years' relevan	t experience in TIC industry
and Related Job Experience	(including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105814L4	Perform environmental testing (microbiological)
	105802L4	Perform microbiological tests
	105804L4 Perform microscopic examination	
	105805L4	Perform staining techniques
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data

17. Environmental Testing (Physical) (Level 4)		
Major Competency Standards	Carry out physical measurements and tests on environmental samples independently and record accurate test data to evaluate the compliance of environmental samples against relevant regulatory limits	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105815L4	Perform environmental testing (physical)
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data

#### Laboratory / On-site Testing -Testing Operations: Construction Materials Testing

18. Physical and Mechanica Testing) (Level 3)	al Testing (On-si	te Concrete Sampling and
Major Competency Standards	Carry out sampling and basic field tests on fresh concrete and on-site curing on concrete cubes by following prescribed procedures and record reliable test data at testing sites.	
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)	
Units of Competency	105846L3 Perform sampling and basic field tests	
	105973L3	Maintain laboratory / field workplace
	105873L3	Record and present data
	105961L4	Implement ethical practices

19. Physical and Mechanic Materials) (Level 3)	al Testing (Concr	ete and Its Constituent
Major Competency Standards	Carry out physical and mechanical tests on concrete and its constituent materials and record test data in testing laboratories.	
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)	
Units of Competency	Perform physical and mechanical te on concrete and its constituent	
	105845L3	Perform basic physical and mechanical tests
	105973L3	Maintain laboratory / field workplace safety
	105873L3	Record and present data
	105961L4	Implement ethical practices

20. Physical and Mechanical Testing (Mortar and Grout) (Level 3)			
Major Competency Standards	Carry out physical and mechanical tests on mortar and grout materials, and record accurate test data in testinglaboratories.		
Years of Work Experience and Related Job Experience	FIVE years' relevant experience in TIC industry (including TWO years' of experience in related field)		
Units of Competency	Perform physical and mechanicaltests on mortar and grout		
	105845L3	Perform basic physical andmechanical tests	
	105973L3	Maintain laboratory / fieldworkplace	
	105873L3	Record and present data	
	105961L4	Implement ethical practices	

21. Physical and Mechanical Testing (Soil and Rock) (Level 4)			
Major Competency Standards	Carry out physical and mechanical tests on soil androck materials, record and analyse test data in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in relatedfield)		
Units of Competency	105873L3 Record and present data		
	105872L4 Process data		
	105835L4	Perform basic physical and mechanical tests on soil and rock	
	105973L3 Maintain laboratory/field		
	105961L4	Implement ethical practices	

22. Physical and Mechanical	22. Physical and Mechanical Testing (Bituminous Materials) (Level 4)			
Major Competency Standards	Carry out physical and mechanical tests on bituminous paving materials and other constituent materials, aggregate and binder, and analyse test data in testing laboratories.			
Years of Work Experience and RelatedJob Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in relatedfield)			
Units of Competency	105873L3 Record and present data			
	105872L4 Process data			
	105838L4	Perform physical and mechanicaltests on bituminous materials		
	105973L3	Maintain laboratory/field		
	105961L4	Implement ethical practices		

23. Physical and Mechanica Structures) (Level 4)	l Testing (Bas	ic Structural Diagnostic Tests onConcrete
Major Competency Standards	Carry out basic structural diagnostic tests on concrete structures in the building / infrastructure sites by applying appropriate non-destructive (NDT) techniques and evaluate test data to determine the condition of concrete structures.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in relatedfield)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105842L4	Perform basic structural diagnostictests on concrete structures
	105973L3	Maintain laboratory/field
	105961L4	Implement ethical practices

24. Chemical Testing on Construction Materials (Level 4)			
Major Competency Standards	Carry out chemical tests on construction materials by applying knowledge of analytical chemistry, record accurate test data and conclude test results in testing laboratories.		
Years of Work Experience and RelatedJob Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	Perform basic chemical tests and procedure		
	105845L3	Perform basic physical andmechanical tests	
	105873L3	Record and present data	
	105788L4	Perform chemical tests onconstruction materials	
	105872L4 Process data		
	Apply statistical calculations to measurement data		
	105971L4	Handle and dispose of chemicalwastes	
	105973L3	Maintain laboratory/fieldworkplace safety	
	105961L4 Implement ethical practices		

# **Laboratory / On-site Testing - Testing Operations:**

## Physical and Mechanical Testing (Toys and Hardlines)

25. Physical and Mechanical (Level 4)	al Testing (Toys a	nd Hardlines - FlammabilityTests
Major Competency Standards	Carry out flammability tests on toys and hardlines products and record accurate test data and observations to judge the compliance of the products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105851L4	Perform flammability tests (toys and hardlines)

26. Physical and Mechanical Construction (Level 4)	al Testing (Toys an	d Hardlines – Stability and
Major Competency Standards	Carry out stability tests and evaluate the marking and construction requirements on toys and hardlines products.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3	Record and present data
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105852L4	Perform stability, physical and mechanical tests
	105853L4	Evaluate the construction of products by visual inspection (consumer products)

27. Physical and Mechanical Testing (Toys – Acoustic Measurement) (Level 4)			
Major Competency Standards	Carry out acoustic measurements on toys and/or other consumer products independently by applying suitable testing equipment and conclude test results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105854L4	Perform acoustic measurements (consumer products)	

# **Laboratory / On-site Testing - Testing Operations:**

## **Textiles and Garment Products Testing**

28. Fabric Construction Tests (Textiles and Garment Products) (Level 4)		
Major Competency Standards	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.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105856L4	Perform fabric construction tests

29. Fabric Strength and Performance Tests (Textiles and Garment Products) (Level 4)		
Major Competency Standards	Carry out suitable fabric strength and performance tests on textile and garment products independently, record accurate test data and determine the fabric construction of the products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105857L4	Perform fabric strength and performance tests

30. Care Performance Tests (Textiles and Garment Products) (Level 4)			
Major Competency Standards	Carry out suitable care performance tests on textile and garment products independently, record accurate test data and judge test results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105859L4	Perform care performance tests	

31. Colour Fastness Tests (	Textiles and Ga	arment Products) (Level 4)
Major Competency Standards	Carry out colour fastness tests on textile and garment products independently, record accurate test data and judge test results in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105860L4	Perform colour fastness tests

32. Flammability Tests (Textiles and Garment Products) (Level 4)		
Major Competency Standards	Carry out suitable flammability tests on textile and garment products independently, record accurate test data and judge the compliance of the products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3	Record and present data
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105861L4	Perform flammability tests (textiles and garments)

33. Fibre Analysis (Textiles and Garment Products) (Level 4)		
Major Competency Standards	Carry out suitable fibre analysis on textile and garment products independently, record accurate test data and determine the fibre types and contents of the products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105858L4	Perform fibre analysis

34. Garment Trim Tests (Textiles and Garment Products) (Level 4)		
Major Competency Standards	Carry out suitable physical strength and performance tests on garment trims independently, record accurate test data and determine the physical strength and performance of the garment trims in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105863L4	Perform garment trim tests

35. Feather and Down Analysis (Level 4)		
Major Competency Standards	Carry out suitable speciation and properties tests on feather and down independently, record accurate test data and determine the fabric properties of feather and down in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105862L4	Perform feather and down analysis

36. Performance Tests (Footwear) (Level 4)		
Major Competency Standards	Carry out suitable physical strength and performance tests on footwear products independently, record accurate test data and determine the performance of footwear products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105864L4	Perform footwear tests

#### Laboratory / On-site Testing -Testing Operations: Electrical and Electronic Products Testing

37. Electrical and Electronic Safety Testing (Electric Shockand Energy Hazard tests) (Level 4)			
Major Competency Standards	Carry out electric shock and energy hazard tests on electrical products and conclude test results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105820L4	Perform electric shock and energy hazard tests	

38. Electrical and Electronic Safety Testing (Electrical Insulation tests) (Level 4)		
Major Competency Standards	Carry out electrical safety tests on electrical and electronic products independently and evaluate their electrical safety in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3	Record and present data
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data
	105821L4	Evaluate electrical insulation properties by electrical measurements
	105822L4	Evaluate electrical insulation properties by physical measurements

39. Electrical and Electronic Safety Testing (Electrical Products - Construction Evaluation) (Level 4)			
Major Competency Standards	Carry out the evaluation of the marking and construction requirements of electrical and electronic products independently by visual inspection and conclude inspection results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105848L4	Evaluate the construction of products by visual inspection (electrical products)	

40. Electrical and Electronic Safety Testing (Thermal Hazard and Flammability Tests) (Level 4)			
Major Competency Standards	Carry out thermal hazard and flammability tests on electrical and electronic products independently and evaluate the thermal hazards and flammability of the products in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105825L4	Perform thermal hazard related tests	
	105826L4	Perform flammability tests (electrical and electronic products)	

41. Electrical and Electronic Safety Testing (Stability and Mechanical tests) (Level 4)			
Major Competency Standards	Carry out stability and mechanical tests on electrical products and conclude test results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105847L4	Perform stability and mechanical tests	

42. Physical and Mechanical Testing (Electrical Products – Acoustic Measurement) (Level 4)			
Major Competency Standards	Carry out acoustic measurements on electrical and electronic products independently by applying suitable testing equipment and conclude test results in testing laboratories.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105873L3 Record and present data		
	105872L4	Process data	
	105871L4	Apply statistical calculations to measurement data	
	105849L4	Perform acoustic measurements (electrical products)	

43. Electrical and Electronic Testing (Energy Efficiency) (Level 4)		
Major Competency Standards	Carry out energy and power consumption measurements on electrical and electronic products independently, record accurate measurement data and evaluate the energy efficiency of the products in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105873L3 Record and present data	
	105823L4	Evaluate energy efficiency of electrical and electronic products
	105872L4	Process data
	105871L4	Apply statistical calculations to measurement data

#### Laboratory / On-site Testing -Testing Quality Management

44. Testing Quality Assurance (Level 4)			
Major	Undertake quality assurance activities and validate test results		
Competency Standards	in compliance with the formulated quality control protocol.		
Years of Work Experience	SIX years' relevant experience in TIC industry		
and Related Job Experience	(including THREE years' of experience in related field)		
Units of Competency	105878L4	Implement laboratory quality control procedures	
	105879L4	Control reference materials and working standards	
	105880L4	Verify critical consumables	
	105904L4	Implement corrective actions for testing services	
	105905L4	Implement preventive actions for testing services	

45. Measurement Traceability (Chemical Testing) (Level 4)			
Major Competency Standards	Undertake measurement traceability activities and validate chemical test results which comply with the formulated quality control protocol.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105890L4	Verify and maintain reference materials	
	105892L4	Handle and perform equipment calibration	

46. Measurement Traceability (Microbiological Testing) (Level 4)			
Major Competency Standards	Undertake measurement traceability activities and validate microbiological test results which comply with the formulated quality control protocol.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105891L4	Verify and maintain reference and working cultures	
	105892L4	Handle and perform equipment calibration	

47. Measurement Traceability (Physical Testing) (Level 4)			
Major Competency Standards	Undertake measurement traceability activities and validate physical test results which comply with the formulated quality control protocol.		
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)		
Units of Competency	105889L4	Calibrate and maintain reference standards	
	105892L4	Handle and perform equipment calibration	

# **Inspection – Inspection Operation**

48. Inspection of Consumer	r Products (Level 4	l)
Major Competency Standards	Prepare and perform inspection activities on consumer products in accordance with the standard operation procedures of the inspection body.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Compatons	105914L3	Prepare work documents for conducting inspection
Units of Competency	105919L3	Record inspection observations and findings
	105911L4	Identify equipment and resources requirement for conducting inspection
	105912L4	Identify items and samples for inspection
	105913L4	Define defect classification and acceptance criteria
	105916L4	Perform on-site inspection of production processes / delivery of services
	105917L4	Inspect items and samples
	105918L4	Perform compliance inspection on materials

49. Inspection of Waterwor	rks Products (Lev	rel 4)
Major Competency Standards	Prepare and perform inspection activities on waterworks products in accordance with the standard operation procedures of the inspection body.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105914L3	Prepare work documents for conducting inspection
	105919L3	Record inspection observations and findings
	105911L4	Identify equipment and resources requirement for conducting inspection
	105912L4	Identify items and samples for inspection
	105913L4	Define defect classification and acceptance criteria
	105916L4	Perform on-site inspection of production processes / delivery of services
	105917L4	Inspect items and samples
	105918L4	Perform compliance inspection on materials

50. Quality Assurance of Inspection Operation (Level 4)		
Major Competency Standards	Perform quality assurance of inspection results and quality system maintenance in compliance with the formulated quality control protocol.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105921L4	Implement inspection quality control procedures
	105930L4	Implement corrective actions and preventive actions for inspection services

# **Operations Management – Occupation Safety and Health**

51. Occupational Safety and Health (Level 4)		
Major Competency Standards	Provide OSH support in operation management in the workplace of the TIC industry.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105964L4	Monitor environmentally sustainable work practices
	105969L4	Implement occupational safety and health supervision
	105970L4	Monitor occupational safety and health system
	105972L4	Identify hazards associated with testing / inspection / certification activities

# Laboratory / On-site Testing Testing Operations: Construction Materials Testing

52. Physical and Mechanical Testing (Steel) (Level 4)		
Major Competency Standards	Carry out physical and mechanical tests on steel materials, record and analyse test data in testing laboratories.	
Years of Work Experience and Related Job Experience	SIX years' relevant experience in TIC industry (including THREE years' of experience in related field)	
Units of Competency	105845L3	Perform basic physical and
	105873L3	Record and present data
	105973L3	Maintain laboratory / field workplace
	105836L4	Perform physical and mechanical tests
	105872L4	Process data
	105961L4	Implement ethical practices