



QESTLab

Australian Test Methods

Electronic Worksheets are screens that conform to a Standards Australia, State Authority or other test method. They collect all the information required by the method, perform calculations and checks according to the method.

QESTLab™ is not restricted to the methods detailed in this list. The Electronic Worksheets outlined here are those that have already been developed for the QESTLab™ system.

New Electronic Worksheets can be quickly developed as a need arises. If you are interested in any test methods not shown in this list, please contact Spectra QEST at www.spectraquest.com.

This list of test methods is based on QESTLab v3.3

AS 1012 - Methods of testing concrete

AS 1012 Parts 1/3.1/8.1/8.2/9/10/14/ Concrete Sample

AS 1012.4.2 * Air Content

AS 1012.5 * Mass Per Unit Volume (Yield)

AS 1012.13 Shrinkage

AS 1012.20 * Sulphate and Chloride In Concrete Aggregate

AS 1012.21 * Water Absorption and Apparent Particle Density

AS 1012.21 * Water Chloride and Sulfate Content

AS 1141 - Methods of sampling and testing aggregates

AS 1141.4 Bulk Density

AS 1141.5 Particle Density - Fine

AS 1141.6.1 Particle Density - Coarse

AS 1141.6.1 Particle Density - Weighted

AS 1141.6.2 Particle Density - Coarse

AS 1141.6.2 * Particle Density and Water Absorption of Coarse Aggregate

AS 1141.7 * Apparent Particle Density of Filler

AS 1141.11 Grading

AS 1141.12 Finer than 75 µm

AS 1141.13 Material Finer Than 2µm

AS 1141.14 Particle Shape (2:1)

AS 1141.14 Particle Shape (3:1)

AS 1141.15 Flakiness Index

AS 1141.16 Angularity Number

AS 1141.17 * Voids in Dry Compacted Filler

AS 1141.18 * Crushed Particles in Coarse Gravel Aggregate

AS 1141.19 Fine Particle Size Distribution By Sieving And Decantation

AS 1141.20.1 Average Least Dimension

AS 1141.20.2 Average Least Dimension

AS 1141.20.3 Average Least Dimension Calculation

AS 1141.21 Aggregate Crushing Value

AS 1141.22 Wet/Dry Strength Variation

AS 1141.23 Los Angeles Value

AS 1141.24 Sodium Sulphate Soundness
AS 1141.25.1 Degradation Factor – Source Rock
AS 1141.25.2 Degradation Factor – Coarse Aggregate
AS 1141.25.3 Degradation Factor – Fine Aggregate
AS 1141.26 - 1996 * Secondary Minerals Content in Igneous Rocks
AS 1141.30 Visual Comparison
AS 1141.31 Light Particles
AS 1141.32 Weak Particles
AS 1141.33 Clay and Fine Silt
AS 1141.34 Organic Impurities
AS 1141.35 * Sugar
AS 1141.41 * Polished Aggregate Friction Value
AS 1141.50 Resistance to Stripping of Cover Aggregate Binders
AS 1141.51 Unconfined Compressive Strength
AS 1141.72 * Cement Content
AS 1141.72 Stabilisation Agent Content (Calibration and Test)

AS 1289 - Methods of testing soils for engineering purposes

AS 1289.1.4.1 Random Site Locations
AS 1289.1.4.2 Random Site Locations
AS 1289.2.1.1 Moisture Content
AS 1289.2.1.2 Moisture Content
AS 1289.2.1.4 Moisture Content
AS 1289.2.1.6 Moisture Content
AS 1289.3.1.1, AS 1289.3.2.1, AS 1289.3.3.1, AS 1289.3.4.1 Atterberg Limits
AS 1289.3.1.2, AS 1289.3.2.1 * Liquid & Plastic Limits - 1 Point
AS 1289.3.1.2, AS 1289.3.2.1, AS 1289.3.3.1, AS 1289.3.4.1 Atterberg Limits Casagrande
AS 1289.3.3.2 * Cone Plasticity Index
AS 1289.3.5.1 Soil Particle Density - Standard Method
AS 1289.3.6.1 Grading
AS 1289.3.6.1 Grading/Ratios
AS 1289.3.6.2 Grading/
AS 1289.3.6.3 Grading/Hydrometer
AS 1289.3.7.1 * Sand Equivalent
AS 1289.3.8.1 Emerson Class Number
AS 1289.3.8.2 * Soil Dispersion
AS 1289.3.8.3 Pinhole Dispersion Classification
AS 1289.3.9.1 * Cone Liquid Limit
AS 1289.4.1.1 * Organics In Soil
AS 1289.4.3.1 * Soil pH
AS 1289.4.4.1 * Electrical Resistivity
AS 1289.5.1.1 Maximum Dry Density - Standard
AS 1289.5.2.1 Maximum Dry Density - Modified
AS 1289.5.3.1 Field Density Sand Replacement
AS 1289.5.3.2 Field Density Sand Replacement
AS 1289.5.4.1 Relative Compaction
AS 1289.5.4.2 Assigned Maximum Dry Density
AS 1289.5.5.1 Min/Max Dry Density Cohesionless
AS 1289.5.6.1 Density Index Method for a Cohesionless Material
AS 1289.5.7.1 Hilf Ratio and Converted Wet Density - Standard
AS 1289.5.8.1 Nuclear Field Density
AS 1289.5.8.1 Appendix A-A1 Nuclear Gauge Calibration
AS 1289.5.8.2 Nuclear Field Density

AS 1289.6.1.1 California Bearing Ratio
AS 1289.6.2.2 * Shear Strength
AS 1289.6.3.1 * Determination of the Penetration Resistance of Soil
AS 1289.6.3.2 Determination of the Penetration Resistance
AS 1289.6.3.3 Determination of the Penetration Resistance
AS 1289.6.4.1 Compressive Strength of Soil
AS 1289.6.4.2 Compressive Strength of Soil
AS 1289.6.7.1 Permeability
AS 1289.6.7.2 Permeability
AS 1289.6.7.3 * Permeability
AS 1289.7.1.1 Shrink/Swell Index

AS 2891 - Methods of sampling and testing asphalt

AS 2891.2.2:1995 Compaction of Asphalt Specimens
AS 2891.3.1 Bitumen Content
AS 2891.3.3 Bitumen Content
AS 2891.5 Marshall Stability
AS 2891.7.1 Maximum Density
AS 2891.7.3 Maximum Density
AS 2891.8 Air Voids - 120 Cycles
AS 2891.8 Air Voids - 250 Cycles
AS 2891.8 Air Voids - 350 Cycles
AS 2891.8 Air Voids - 50 Cycles
AS 2891.8 Air Voids - 80 Cycles
AS 2891.9.1 Bulk Density
AS 2891.9.2 (Field) Core Density
AS 2891.9.2 Bulk Density (Lab)
AS 2891.9.3 (Field) Core Density
AS 2891.9.3 Bulk Density
AS 2891.13.1:1995 Resilient Modulus of Asphalt (no pre-cndn)
AS 2891.14.2 Appendix B, RC316.00 Density Offset
AS 2891.14.2, RC316.00 Nuclear Field Density

AS 3580 - Methods for sampling and analysis of ambient air

AS 3580.10.1 * Dust Gauge Analysis

AS 4133 - Methods of testing rocks

AS 4133.1.1.1 Moisture Content (Rock)
AS 4133.2.1.1 Rock Porosity
AS 4133.2.1.2 Rock Porosity
AS 4133.4.1 Rock Strength - Point Load
AS 4133.4.2.1 Rock Strength - Uni-axial

Queensland Main Roads

Q050 Random Site Locations
Q101 * Preparation of Disturbed Samples
Q102A Moisture Content
Q102B Moisture Content
Q102C Moisture Content
Q102D Moisture Content
Q102E * Moisture Content
Q103A Grading
Q103B Grading

Q103C Particle Size Analysis of Soils - Hydrometer
Q104A/Q105/Q106 - 08 Atterberg Limits
Q104A/Q105 - 10 Atterberg Limits
Q104D/Q105/Q106 - 08 Atterberg Limits (One Point Liquid Limit)
Q104D/Q105 - 10 Atterberg Limits (One Point Liquid Limit)
Q109 * Apparent Particle Density of Soil
Q109A * Apparent Particle Density of Soil
Q109B * Apparent Particle Density of Soil
Q110A Maximum Dry Density - Standard
Q110B Maximum Dry Density - Modified
Q110C Maximum Dry Density - Standard
Q110D Maximum Dry Density - Modified
Q110E * Laboratory Compaction of Nominated Levels of Dry Density and Moisture Content
Q110F Assigned Maximum Dry Density
Q111A Field Density Sand Replacement
Q111B Treatment of Oversize Material *
Q111B, Q111C, Q111D Dry Density Ratio and Degree of Saturation
Q112 Nuclear Gauge Relative Compaction of Soil
Q113A California Bearing Ratio
Q113A California Bearing Ratio - Multipoint
Q113B California Bearing Ratio
Q113B California Bearing Ratio - Multipoint
Q113C California Bearing Ratio
Q113C California Bearing Ratio - Multipoint
Q114B * California Bearing Ratio
Q115 Unconfined Compressive Strength
Q132A Min/Max Dry Density Cohesionless
Q132B Density Index Method for a Cohesionless Material
Q134 Calibration Heat of Neutralisation for Stabilisation Agent Content
Q134 Test Procedure Heat of Neutralisation for Stabilisation Agent Content
Q141B - 10 Compacted Density of Soils & Crushed Rock (Sand Replacement)
Q142A - 10 Dry Density - Moisture Relationship (Standard Compaction)
Q144A - 10 Assigned Maximum Density
Q145A - 10 * Laboratory Compaction to Nominated Levels of Dry Density and Moisture
Q153 * Standard Penetrometer Test
Q201 - 10 Flakiness Index
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Q201B Flakiness Index
Q202 Average Least Dimension - Direct Method
Q202 Average Least Dimension - Indirect Method
Q204A Aggregate Crushing Value
Q204B Aggregate Crushing Value
Q205A Dry Strength
Q205A/B/C Wet/Dry Strength Variation
Q205B Wet Strength
Q205C Wet/Dry Strength Variation
Q206 Los Angeles Value
Q208A Degradation Factor
Q208B Degradation Factor
Q209 - 10 Sodium Sulphate Soundness
Q210B * Organic Impurities
Q212A Bitumen Stripping Value (Standard Plate)
Q212B Bitumen Stripping Value (Modified Plate)

Q213 – 10 Particle Shape (Proportional Calliper)
Q214A Particle Density - Fine
Q214B Particle Density - Coarse
Q214C * Particle Density - Coarse
Q215 * Crushed Particles
Q216 * Degree of Aggregate Precoating
Q217 * Weak Particles
Q221A Loose Unit Mass Of Aggregate
Q221B Compacted Unit Mass of Aggregate
Q451A * Slump Test
Q455A * Compression and Indirect Tensile Test

Vic Roads

RC 201.01 * Binder Thickness
RC 210.06 Bitumen Content
RC 210.07 Bitumen Content
RC 302.11 Flakiness Index
RC 302.12 * Median Size and Average Least Dimension
RC 316.00 Lot Conformity (Asphalt)
RC 316.10 Random Site Locations
RC 372.01 Visual Assessment
RC 372.04 * Foreign Materials in Crushed Concrete

NSW RTA

RTA R116 Insitu Air Voids
RTA Q6 Random Site Locations
RTA T102 * Pretreatment of Road Material by Compaction
RTA T103 * Pretreatment of Road Material by Artificial Weathering
RTA T106 Grading
RTA T107 Grading
RTA T108, RTA T109, RTA T113 Atterberg Limits
RTA T111 Maximum Dry Density - Standard
RTA T112 Maximum Dry Density - Modified
RTA T114 Max Dry Compressive Strength
RTA T116 * Unconfined Compressive Strength
RTA T117 California Bearing Ratio
RTA T117A California Bearing Ratio
RTA T119 * Density of Road Materials - Sand Replacement
RTA T120 Moisture Content
RTA T121 Moisture Content
RTA T130 Maximum Dry Density
RTA T131 Unconfined Compressive Strength
RTA T132 California Bearing Ratio
RTA T136 * Rate of Spread of Lime or Cement
RTA T160, RTA T199 Benkelman Beam
RTA T161 * Dynamic Cone Penetrometer
RTA T162 Converted Wet Density
RTA T164 Min/Max Dry Density Cohesionless
RTA T164 Min/Max Dry Density Cohesionless by Vibration
RTA T166 Relative Compaction
RTA T171 Triaxial
RTA T173 Nuclear Field Density
RTA T180 Moisture Content

RTA T190 Grading/Hydrometer
RTA T201 Grading
RTA T203 Finer 75µm
RTA T204 Los Angeles Value
RTA T205 Aggregate Crushing Value
RTA T208 Water Adsorption - Coarse
RTA T209 Particle Density - Coarse
RTA T210 Particle Density - Fine
RTA T211, RTA T212 Bulk Density
RTA T213 Particle Shape (2:1)
RTA T213 Particle Shape (3:1)
RTA T215 Wet/Dry Strength Variation
RTA T223 Rock Strength – Point Load
RTA T230 Resistance to Stripping of Aggregates and Binders
RTA T235 Average Least Dimension
RTA T238 Initial Adhesion of Cover Aggregates and Binders
RTA T239 Fractured Faces
RTA T260 Organic Impurities
RTA T262 Moisture Content
RTA T264 Total Soluble Salts
RTA T266 Sodium Sulphate Soundness
RTA T268 Clay And Fine Silt
RTA T269 * Sugar
RTA T270 Material Finer Than 2µm
RTA T275 Average Least Dimension
RTA T276 * Foreign Materials Content of Recycled Crushed Concrete
RTA T312 Shrinkage
RTA T318 Moisture Content - Saturated Surface Dry
RTA T319 Moisture Content - Saturated Surface Dry
RTA T363 * Alkali Reactivity
RTA T368 Dressing of voids in concrete specimens and adjustment for embedded steel
RTA T1010 * Chloride In Soil
RTA T1011 * Sulphate In Soil

Transport SA

TSA-MAT-TP134 Grading
TSA-MAT-TP141, TSA-MAT-TP143 Atterberg Limits
TSA-MAT-TP166 Maximum Dry Density - Standard
TSA-MAT-TP195 Cement Content
TSA-MAT-TP230 Grading
TSA-MAT-TP240 Elongation Index
TSA-MAT-TP241 Flakiness Index
TSA-MAT-TP244 * Percentage of Flat particles
TSA-MAT-TP428 Compaction of Asphalt Specimens
TSA-MAT-TP435 Maximum Density
TSA-MAT-TP436 Bulk Density
TSA-MAT-TP437 Bulk Density (Lab)
TSA-MAT-TP470 Bitumen Content
TSA-MAT-TP705 * Aggregate Stripping Value

Main Roads WA

WA 0.1 Random Site Locations
WA110.1 Moisture Content

WA110.2 Moisture Content
WA115.1 Grading
WA115.2 Grading
WA120.1, WA121.1, WA122.1, WA123.1 Atterberg Limits (incl. CPL or LL charts)
WA132, WA133 Assigned Maximum Dry Density
WA132.1 Maximum Dry Density - Standard
WA132.2 Maximum Dry Density - Standard
WA133.1 Maximum Dry Density - Modified
WA133.2 Maximum Dry Density - Modified
WA134.1, WA136.1 Dry Density Ratio and Moisture Ratio
WA135.2 Nuclear Gauge Calibration
WA140.1 * Max Dry Compressive Strength
WA141.1 California Bearing Ratio
WA210.1 Grading
WA212.1 Moisture Content
WA212.2 Moisture Content
WA216.1 Flakiness Index
WA220.1 Los Angeles Value
WA250.1 * Colour of Aggregate
WA324.1 Field Density Sand Replacement
WA324.2 Nuclear Field Density
WA910.1 * Chlorides and Total Soluble Salts in Soil and Water
WA915.1 Calcium Carbonate Content
WA2040.2 Nuclear Gauge Calibration

*Indicates test screen that allows for the entry of test results and other data required for reporting only (does not perform calculations).

Note: Although every effort has been made to ensure that the above information is correct, Spectra QEST makes no guarantee as to its accuracy.