USEFUL INFORMATION

SAMPLE SIZES

TEST	DESCRIPTION	TEST METHOD (TMH 1) or Equivalent ASTM or BS EN	MINIMUM SAMPLE SIZE	REQUIRED TESTING TIME
Indicator Test	Determination of sieve analysis to 0.075mm size and Atterberg Limits (LL, IP, LS)	A1 – A5	Fine : 2kg Medium : 5kg Coarse : 25kg Very Coarse : 50 – 100kg	4 working days
Foundation Indicator (including hydrometer test)	Determination of sieve analysis to 0.075mm and particle size distribution to 0.002mm size plus Atterberg Limits (LL, IP, LS)	A1 – A5 + ASTM D422	As above	5 working days
Mod. AASHTO	Determination of maximum dry density and optimum moisture content	A7	50kg	2 working days
Mod. AASHTO + CBR	Determination of maximum dry density and optimum moisture plus California Bearing Ratio – load required to penetrate a standard piston into a sample expressed as a percentage of the California standard values	A7 + A8	100kg	Natural : 6 working days Stabilized : 14working days

UCS Design	Determination of unconfined compressive strength of material after adding different percentages of stabiliser (cement, lime, bitumen)	A14	200kg (10kg of stabiliser to be used is required as well)	Accelerated cured: 7 working days 7 days Cured: 10 working days
Stabiliser Content (back titration)	Determination of percentage, by mass, of stabiliser in natural soil	A15	Test sample : 2kg Raw sample : 25kg/section Stabiliser : 2kg/section (Note: 10 specimens constitute a sample/section)	4 working days
Concrete Mix Design (per concrete class)	Determination of the different mass/volume of different aggregates, water, cement, additives (if any) required to be mixed to obtain a specified concrete class	Fulton	Coarse : 150kg per aggregate Fine : 100kg per aggregate Cement: 50kg Additives: as required	Provisional : 14 calendar days Final: 35 calendar days
Theoretical Concrete Mix Design	As above but excluding the manufacture of concrete cubes	Fulton	As above	4 working days
Concrete Cube Testing	Determination of the compressive strength of already manufactured cubes	D1	Minimum of 3 cubes for each due date for crushing	Crushing date + 1 working day (Note: cubes to be received at least 24 hours before due date)
Sand Equivalent	Determination of presence or absence of detrimental substances or clay in fine aggregate	B19	3kg	3 working days
Aggregate Grading	Determination of sieve analysis of fine or coarse aggregate	B4	Fine Aggregate: 3kg Coarse Aggregate: 10kg	3 working days
Flakiness Index	Determination of percentage (by mass) of coarse aggregates that will pass through slots of widths that are half of the sieve openings through which each of the fractions pass	B3	10 – 50kg depending on grading	3 working days

ACV	Determination of the percentage fines obtained when a certain fraction is subjected to gradually applied load of 400kN Determination of Marshall properties (i.e. BRD, Flow, Stability, Air Voids, Rice), obtained on compacted asphalt briquettes at a specified grading after addition of different percentages of binder Determination of Marshall properties (i.e. BRD, Flow, Stability, Air Voids, Rice) plus binder content and grading on premixed asphalt Determination of the binder content of premixed asphalt and sieve analysis of washed aggregates	B1	25 – 50kg depending on grading	3 working days
Asphalt Mix Design		C1	Fine : 50kg Coarse: 100kg (Note: in addition, 5 litres of binder + filler (if any) must be supplied)	10 working days
Marshall Tests		C2 – C5 & C7	Hot asphalt (supplied in a hot box)	3 working days
Asphalt Binder Content & Grading		C7 + B4	3kg	3 working days

Please note that the Laboratory tests are not limited to the above table which includes only common tests. The indicative testing times assume that tests will commence immediately after receiving the samples.

Any clarifications on these tests and more not included in this table can be obtained from Laboratory Manager on telephone +263-771 161 211 or email enquiries@miamigeotech.co.zw.