

NB: Complete page 1-2 and all other pages applicable to your request

Sample Information				FOR OFFICIAL USE
No.	Sample Description	Sampling Date	Sample Matrix*	Lab Sample No.
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***Sample Matrix Abbreviation Key**

Aggregate = A Cement/Lime = C/L Stabilised material = SM Gypsum = G Soil/Water for corrosivity testing = S/W

Please specify:

Sampling done by: _____

Signature: _____

Reference of the sampling method (if available): _____

Project name: _____

Special Instructions (when applicable): sample storage/disposal; outsourced tests

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CHEMICAL ANALYSIS OF AGGREGATES

Note: The laboratory will select the test parameters on behalf of the client, when a signed quotation is attached to this request form.

No.	Test Parameters	Reference Method	Tick
1.	pH value on a soil suspension (2:5)	TMH 1 A20	<input type="checkbox"/>
2.	pH on a saturated paste	NITRR CA 21 / SANS 5854:2006	<input type="checkbox"/>
3.	Conductivity on saturated paste	TMH 1 A21T	<input type="checkbox"/>
4.	Soil redox potential on a soil suspension (1:2)	In-house based on Metrohm application Bulletin 71/3 e	<input type="checkbox"/>
5.	Soundness of stone (magnesium sulphate method), max 20 cycles	SANS 5839:2008	<input type="checkbox"/>
6.	Soundness of fine aggregates (magnesium sulphate method), max 5 cycles	SANS 5839:2008	<input type="checkbox"/>
7.	Durability test for ballast stone (ethylene glycol durability)	SATS S406 (1984), App. B	<input type="checkbox"/>
8.	Chloride content of aggregates	SABS 830	<input type="checkbox"/>
9.	Water soluble sulphates of fines in aggregates	SABS 850-1:1998	<input type="checkbox"/>
10.	Acid soluble sulphate content	BS 1377:1975	<input type="checkbox"/>
11.	Total water soluble salts content of fines in aggregates	SABS 849	<input type="checkbox"/>
12.	Organic impurities in fine aggregates (limit test)	SANS 5832:2006	<input type="checkbox"/>
13.	Detection of sugar in fine aggregates	SANS 5833:2006	<input type="checkbox"/>
14.	Deleterious clay content of fines in aggregates (MB adsorption test)	SABS 1243:1994	<input type="checkbox"/>
15.	Available lime in limes for soil stabilisation	SABS 1296:1999	<input type="checkbox"/>
16.	Cement or lime content of stabilizing materials (ICP-OES):	TMH1 A 15 (b)	<input type="checkbox"/>
	Analysis of aggregate, cement and stabilised material		
	Additional stabilised material		
17.	Initial consumption of lime ("gravel ICL"), 0-6%	N.T.S., A17T, DOT Manual M5 App. A	<input type="checkbox"/>
18.	Determination of the carbonate content	BS 1377: Part 3:1990 (titrimetric)	<input type="checkbox"/>
19.	Determination of organic carbon	BS 1377: Part 3:1990	<input type="checkbox"/>
20.	Bulk densities and voids content of aggregates	SABS 845:1994	<input type="checkbox"/>
21.	Shell content (ignition method)	SANS 5840:2008	<input type="checkbox"/>
24.	Acid insolubility test	SANS 6242:2008	<input type="checkbox"/>
25.	Low density material content	SABS 837	<input type="checkbox"/>
	Gypsum analysis		
26.	XRF (silica, SO ₃ , CaO)	In-house method on pulp	<input type="checkbox"/>
27.	Moisture (40-45°C)	VGB-M 701 (2 nd Ed)	<input type="checkbox"/>
28.	Crystallisation water (360°C)	VGB-M 701 (2 nd Ed)	<input type="checkbox"/>
	Assessment of aggressiveness of chemical environment: soil		
29.	pH of soil suspension 2.5:1 w/s	TMH 1 A20	<input type="checkbox"/>
30.	Conductivity on saturated paste	TMH 1 A21T	<input type="checkbox"/>
31.	Water soluble sulphates 2:1 w/s	SABS 850-1:1998	<input type="checkbox"/>
32.	Water soluble magnesium 2:1 w/s	ICP-OES	<input type="checkbox"/>
33.	Water soluble ammonium 2:1 w/s	AWWA	<input type="checkbox"/>
34.	Water soluble nitrite 2:1 w/s	Spectroquant	<input type="checkbox"/>
35.	Water soluble chloride 2:1 w/s	SABS 830	<input type="checkbox"/>
36.	Acid soluble sulphates	BS 1377:1975	<input type="checkbox"/>
37.	Carbonates	BS 1377: Part 3:1990 (titrimetric)	<input type="checkbox"/>

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No.	Test Parameters	Reference Method	Tick
	Assessment of aggressiveness of chemical environment: ground water y		
38.	pH	Electrometric	<input type="checkbox"/>
39.	Soluble sulphate	Nephelometric	<input type="checkbox"/>
40.	Soluble magnesium	ICP-OES	<input type="checkbox"/>
41.	Free and saline ammonium	Colorimetric	<input type="checkbox"/>
42.	Nitrate	Colorimetric	<input type="checkbox"/>
43.	Chloride	Argentometric	<input type="checkbox"/>
44.	Aggressive carbon dioxide	Titrimetric	<input type="checkbox"/>
	Particle size analysis		
45.	Particle size analysis (2000, 1000, 500, 212, 106, 53µm)	In-house, combination of dry and wet screening)	<input type="checkbox"/>
46.	Particle size analysis, 2000 - 53µm + silt and clay	In-house, combination of sieving and pipette method	<input type="checkbox"/>
47.	Particle size analysis (sand, silt and clay)	Soil – pipette, method	<input type="checkbox"/>

GROUP TESTS

No.	Test Parameters	Interpretation of results based on:	Tick
1.	Concrete mixing test (Fulton), including: pH, conductivity, TDS, alkalinity, chloride, sulphate	South African National Standard, SANS 51008:2006	<input type="checkbox"/>

Note: Prices are specified on FM 7.1-5