

## GEOTECHNICAL TESTING SERVICES

### CONCRETE AND CEMENT CAPABILITIES

SGS offers a comprehensive range of geotechnical services at accredited labs worldwide. Our expert technicians can provide field and laboratory testing on concrete and cement, utilizing both destructive and non-destructive testing methodologies.

Globally, SGS provides a comprehensive range of testing services in accordance with internationally recognized standards including ASTM (American Society for Testing and Materials) and US EPA (Environmental Protection Agency) methods.

Whether your business is construction, mining, oil sands or elsewhere, SGS can provide you with trusted services that reduce your risk while meeting all of your geotechnical testing needs.

	GLADSTONE, AUSTRALIA	EDMONTON, CANADA	FORT MCMURRAY, CANADA	PRAGUE, CZECH REPUBLIC	SANTIAGO, CHILE	SHANGHAI, CHINA	MUMBAI, INDIA	PYOUNGTAEK, SOUTH KOREA	MADRID, SPAIN	KAOSIUNG, TAIWAN	SITTARD, THE NETHERLANDS	BECKLEY, USA	HO CHI MINH CITY, VIETNAM
Sampling fresh concrete	•	•	•	•	•	•	•	•	•	•			•
Making & curing of test specimens after sampling	•	•	•	•		•	•	•	•	•	•		•
Slump test <i>Measures workability of fresh concrete.</i>				•			•	•		•	•		•
Consistency of fresh concrete	•			•		•	•	•	•	•	•		•
Soundness of cement by Le Chatelier test							•	•			•		•
Shear test <i>Determines shear strength of concrete samples.</i>						•	•	•					•
Compression tests (cylinders and cores) <i>Determines the behaviour of concrete and other materials under crushing loads.</i>	•	•	•	•	•	•	•	•	•	•	•		•
Uniaxial compressive strength <i>With &amp; without determination of static elastic moduli.</i>				•	•	•	•	•		•	•	•	•
Triaxial compressive strength <i>Compression test with addition of confining pressure around cylinder using pressurized oil.</i>					•			•				•	

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Tensile splitting strength (axial & dimetrial) <i>Compression of cylindrical samples until failure.</i>				•	•		•	•	•	•	•	•	•
Point load strength test <i>Determines the point load strength index of specimens.</i>					•			•				•	•
Compressive strength of grout <i>Determines the compressive strength of grout cubes.</i>		•	•	•		•		•	•	•	•		•
Schmidt index (elastic /strength properties) <i>Determines compressive &amp; elastic strength of concrete using a spring loaded hammer and the measurement of its rebound.</i>	•			•	•		•	•		•			
Slake durability test <i>Determines weathering resistance of shales, mudstones, siltstones and other clay-bearing rocks.</i>					•			•				•	
Fineness							•	•		•	•		•
Sieving 200 µm and 90 µm							•	•		•	•		•
Quantitative determination of constituents							•	•		•	•		
Mass per unit volume	•	•	•	•	•	•	•	•	•	•	•		•
Density				•				•		•	•		•
Density and water absorption				•				•		•	•		•
Heat of hydration								•		•	•		•
Chemical composition (insoluble residue, sulphate, loss on ignition, chloride)							•	•		•	•		•
Acid insoluble material							•	•		•	•		•
Loss on calcining							•	•		•	•		•
Cement content							•	•			•		
Air content				•			•	•		•	•		•
Carbonation depth <i>Assessed by determining the pH value of cement.</i>				•			•	•		•	•		

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Carbon dioxide content							•	•		•	•		•
Alkali content							•	•		•	•		•
Chloride content							•	•		•	•		•
Sulphate content							•	•		•	•		•

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