

## **Soil Chemical Testing**

<b>Soil Chemical Testing</b>	<b>Standard</b>
pH	BS 1377-3,AASHTO T 289
Chloride (Acid-Soluble)	BS 1377-3
Sulfate(Water-Soluble)	BS 1377-3,AASHTO T 290
Sulfate(Acid-Soluble )	BS 1377-3
Carbonate Content(as CO <sub>2</sub> )	BS 1377-3,ASTM D 4373
Organic matter content (Walkley & Black's method)	BS 1377-3
Mass loss on Ignition	BS 1377-3
Lime content of Uncured Soil-Lime Mixture	ASTM D 3155
Acid insoluble residue	ASTM C 25-98
Specific electrical conductivity *	Australian Standard

## **Aggregate Chemical Testing**

<b>Aggregate Chemical Testing</b>	<b>Standard</b>
Chloride (Water-Soluble)	BS 812, Part 117
Chloride (Acid -Soluble)	BS 812,Part 117
Sulfate(Water-Soluble)	BS 812,Part 118
Acid-soluble material in Fine Aggregates	BS 812,Part 119
Soundness of Aggregates - (Sodium Sulfate)	ASTM C 88,
Soundness of Aggregates - (Sodium Sulfate)	BS 812,Part 121
Soundness of Aggregates(Magnesium Sulfate)	ASTM C 88
Soundness of Aggregates(Magnesium Sulfate)	BS 812,Part 121
Soundness of Aggregates-(Sodium Sulfate)	AASHTO T-104
Organic Impurities in Fine Aggregates for Concrete	AASTM C 40
Alkali-Silica Reactivity of Aggregates(Chemical Method)	ASTM C 289
Insoluble Residue in Carbonate Aggregates	ASTM D 3042

## **Concrete Chemical Testing**

<b>Concrete Chemical Testing</b>	<b>Standard</b>
Calcium oxide content (CaO)	BS 1881: Part 124: 1988
Magnesium oxide content (MgO)	BS 1881: Part 124: 1988
Silicon dioxide content (SiO <sub>2</sub> )	BS 1881: Part 124: 1988
Sulphate Content (as a SO <sub>3</sub> )	BS 1881: Part 124: 1988
pH (concrete: water ratio is 1:1)	BS 1881: Part 124: 1988

## **Cement Chemical Testing**

<b>Cement Chemical Testing</b>	<b>Standard</b>
Insoluble Residue	SLS 107:PART 2: 2008, ASTM C 114-10
Loss on Ignition	SLS 107:PART 2: 2008, ASTM C 114-10
Silicon dioxide content (SiO <sub>2</sub> )	SLS 107:PART 2: 2008, ASTM C 114-10
Iron oxide Content (Fe <sub>2</sub> O <sub>3</sub> )	SLS 107:PART 2: 2008, ASTM C 114-10
Aluminum oxide content (Al <sub>2</sub> O <sub>3</sub> ) (concrete: water ratio is 1:1)	SLS 107:PART 2: 2008, ASTM C 114-10
Sulphate Content (as a SO <sub>3</sub> )	SLS 107:PART 2: 2008
Chloride Content (Cl <sup>-</sup> )	SLS 107:PART 2: 2008
Calcium oxide content (CaO)	SLS 107:PART 2: 2008,ASTM C 114-10
Magnesium oxide content (MgO)	SLS 107:PART 2: 2008,ASTM C 114-10
Lime Saturation Factor	SLS 107:PART 2: 2008

C3A	ASTM C 114-10
C2S	ASTM C 114-10
C3A	ASTM C 114-10
C4AF	ASTM C 114-10