

# Chemical Testing

S.No	Group	Sub Group	Test
	Building Material	Aggregate	Water Soluble Sulphate as $\text{SO}_3$
	Building Material	Aggregate	Alkali Aggregate Reactivity- Reduction in Alkalinity
	Building Material	Aggregate	Alkali Aggregates Reactivity- Dissolved Silica
	Building Material	Aggregate	Water Soluble Chloride as Cl
	Building Material	Cement	Alumina as $\text{Al}_2\text{O}_3$
	Building Material	Cement	Calcium Oxide as CaO
	Building Material	Cement	Insoluble Residue
	Building Material	Cement	Iron Oxide as $\text{Fe}_2\text{O}_3$
	Building Material	Cement	Magnesia as MgO
	Building Material	Cement	Potassium Oxide as $\text{K}_2\text{O}$
	Building Material	Cement	Silica as $\text{SiO}_2$
	Building Material	Cement	Sodium Oxide as $\text{Na}_2\text{O}$
	Building Material	Cement	Sulphate as $\text{SO}_3$
	Building Material	Cement	Total Chloride Content
	Building Material	Cement	Total loss on Ignition
	Building Material	Fly ash	Combined Aluminium Oxide( $\text{Al}_2\text{O}_3$ )+Iron Oxide( $\text{Fe}_2\text{O}_3$ )
	Building Material	Fly Ash	Magnesium Oxide as MgO
	Building Material	Fly ash	Potassium Oxide as $\text{K}_2\text{O}$
	Building Material	Fly ash	Reactive Silica
	Building Material	Fly Ash	Silicon Di oxide( $\text{SiO}_2$ )
	Building Material	Fly ash	Sodium Oxide as $\text{Na}_2\text{O}$
	Building Material	Fly Ash	Sodium Oxide as $\text{Na}_2\text{O}$
	Building Material	Fly ash	Sulphate as ( $\text{SO}_3$ )
	Building Material	Fly Ash	Total Chloride Content

	<b>Building Material</b>	Fly Ash	Total Loss on Ignition
	<b>Building Material</b>	Lime	Calcium Oxide (CaO)
	<b>Building Material</b>	Lime	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )& Alumina Oxide(Al <sub>2</sub> O <sub>3</sub> )
	<b>Building Material</b>	Lime	Insoluble Residue in Hydrochloric acid
	<b>Building Material</b>	Lime	Loss in Ignition
	<b>Building Material</b>	Lime	Magnesium Oxide (MgO)
	<b>Building Material</b>	Lime	Silicon Dioxide(SiO <sub>2</sub> )
	<b>Building Material</b>	Admixture	Ash Content
	<b>Building Material</b>	Admixture	Chloride Content
	<b>Building Material</b>	Admixture	Dry Material Content
	<b>Building Material</b>	Admixture	pH Value
	<b>Building Material</b>	Admixture	Relative Density
	<b>Building Material</b>	Silica Fume/Micro Silica	Loss on Ignition
	<b>Building Material</b>	Silica Fume/Micro Silica	Moisture Content
	<b>Building Material</b>	Silica Fume/Micro Silica	Potassium Oxide as K <sub>2</sub> O
	<b>Building Material</b>	Silica Fume/Micro Silica	Silica as SiO <sub>2</sub>
	<b>Building Material</b>	Silica Fume/Micro Silica	Sodium Oxide as Na <sub>2</sub> O

<b>S.No</b>	<b>Group</b>	<b>Sub Group</b>	<b>Test</b>
	<b>Metallic coatings &amp; treatment solutions</b>	MS Steel /Carbon Steel/ Structure Steel	Mass of Zinc Coating
	<b>Metallic coatings &amp; treatment solutions</b>	Zinc Coating on Iron and Steel and other Allied Products	Adhesion Test of Zinc Coating(Pivoted Hammer Test)
	<b>Metallic coatings &amp; treatment solutions</b>	Zinc Coating on Iron and Steel and other Allied Products	Adhesion Test of Zinc Coating (Knife Test)
	<b>Metallic coatings &amp; treatment solutions</b>	Zinc Coating on Iron and Steel and other Allied Products	Uniformity of Zinc coating Thickness
	<b>Metallic coatings &amp; treatment</b>	Zinc Coating on Iron and Steel and other Allied	Visual Examination

	<b>solutions</b>	Products	
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Aluminum
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Boron
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	carbon
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Carbon
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Chromium
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Copper
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Manganese
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Manganese
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Molybdenum
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Nickel
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Niobium
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Nitrogen
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Phosphorous
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Phosphorus
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Silicon
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Silicon
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Sulphur
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Sulphur
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Titanium
	<b>Metals &amp; Alloys</b>	Mild Steel/carbon steel/Low Alloy Steel	Vanadium
	<b>Metals &amp; Alloys</b>	Stainless Steel	Carbon
	<b>Metals &amp; Alloys</b>	Stainless Steel	Chromium
	<b>Metals &amp; Alloys</b>	Stainless Steel	Manganese
	<b>Metals &amp; Alloys</b>	Stainless Steel	Nickel
	<b>Metals &amp; Alloys</b>	Stainless Steel	Phosphorus
	<b>Metals &amp; Alloys</b>	Stainless Steel	Silicon
	<b>Metals &amp; Alloys</b>	Stainless Steel	Sulphur
	<b>Soil and Rock</b>		

		Soil	Calcium Carbonate
	Soil and Rock	Soil	Organic Matter
	Soil and Rock	Soil	pH Value
	Soil and Rock	Soil	Total Nitrogen including Nitrate Form
	Soil and Rock	Soil	Total Soluble Solids
	Soil and Rock	soil	Total Soluble Sulphates
	Soil and Rock	Soil	Water/Acid Soluble Chlorides
	Water	Water for Construction Purpose	Chloride(as Cl)
	Water	Water for Construction Purpose	Inorganic (Fixed)
	Water	Water for Construction Purpose	MI of 0.02NH <sub>2</sub> SO <sub>4</sub> Required to neutralize 100ml of Water Sample, using Mixed Indicator
	Water	Water for Construction Purpose	MI of 0.02NNaOH required to neutralize 100ml of Water Sample, using Phenolphthalein Indicator
	Water	Water for Construction Purpose	Organic(Volatile)
	Water	Water for Construction Purpose	pH value
	Water	Water for Construction Purpose	Sulphate (as SO <sub>3</sub> )
	Water	Water for Construction Purpose	Total Suspended Solids
	Water	Drinking Water	Calcium as Ca
	Water	Drinking Water	Chloride(as Cl)
	Water	Drinking Water	Chlorine Residual
	Water	Drinking Water	Color
	Water	Drinking Water	Filterable Residue: Total Dissolved Solids
	Water	Drinking Water	Fluoride(as F)
	Water	Drinking Water	Iron as Fe
	Water	Drinking Water	Magnesium as Mg
	Water	Drinking Water	Odour
	Water	Drinking Water	pH Value
	Water	Drinking Water	SulphatesasSO <sub>4</sub>
	Water	Drinking Water	Taste
	Water	Drinking Water	Total Alkalinity as CaCO <sub>3</sub>
	Water	Drinking Water	Total Hardness as CaCO <sub>3</sub>
	Water	Drinking Water	Turbidity

	<b>Water</b>	Waste Water	Ammonia Cal Nitrogen as NH <sub>3</sub> -N
	<b>Water</b>	Waste Water	Biochemical Oxygen Demand(BOD)
	<b>Water</b>	Waste Water	Chemical Oxygen Demand(COD)
	<b>Water</b>	Waste Water	Chloride As Cl
	<b>Water</b>	Waste Water	Chromium as Cr+6
	<b>Water</b>	Waste Water	Copper as Cu
	<b>Water</b>	Waste Water	Dissolve Oxygen (DO)
	<b>Water</b>	Waste Water	Oil and Grease
	<b>Water</b>	Waste Water	pH Value
	<b>Water</b>	Waste Water	Phosphorous as P
	<b>Water</b>	Waste Water	Specific Conductance
	<b>Water</b>	Waste Water	Temperature
	<b>Water</b>	Waste Water	Total Dissolved Solid (Filtrable Residue)
	<b>Water</b>	Waste Water	Total Solid(Dissolved + Suspended)
	<b>Water</b>	Waste Water	Total Suspended Solid