| Laboratory | Ultratech Cement Limited (Unit: Rajashree Cement Works) Laboratory, Aditya Nagar, Malkhed Road, Dist. Gulbarga, Karnataka | | |
|------------------------|--|----------------------------|--|
| Accreditation Standard | ISO/IEC 17025: 2005 | | |
| Certificate Number | TC-5630 (In lieu of T-2444 & T-2445) | Page 1 of 2 | |
| Validity | 24.04.2017 to 23.04.2019 | Last Amended on 08.05.2017 | |

| SI. | Product / Material | Specific Test | Test Method Specification | Range of Testing / |
|-----|--------------------|---------------|---------------------------|---------------------|
| | of Test | Performed | against which tests are | Limits of Detection |
| | | | performed | |

CHEMICAL TESTING

| Ι. | BUILDING MATERIALS | | | |
|----|--------------------|------------------------|---------|-------------------|
| 1. | Cement | Silicon Di-Oxide | IS 4032 | 10 % to 35 % |
| | OPC 43, OPC53, | Aluminium Oxide | IS 4032 | 4.0 % to 12.0 % |
| | PPC | Iron Oxide | IS 4032 | 3.0 % to 8.0 % |
| | | Calcium Oxide | IS 4032 | 40.0 % to 68.0 % |
| | | Magnesium Oxide | IS 4032 | 0.20 % to 6.0 % |
| | | Sulphuric Anhydride | IS 4032 | 0.80 % to 5.0 % |
| | | Total Loss on Ignition | IS 4032 | 0.20 % to 10.0 % |
| | | Insoluble Residue | IS 4032 | 0.20 % to 40.0 % |
| | | Total Chlorides | IS 4032 | 0.001 % to 0.10 % |

-

| Laboratory | Ultratech Cement Limited (Unit: Rajashree Cement Works) Laboratory, Aditya Nagar, Malkhed Road, Dist. Gulbarga, Karnataka | | |
|------------------------|--|----------------------------|--|
| Accreditation Standard | ISO/IEC 17025: 2005 | | |
| Certificate Number | TC-5630 (In lieu of T-2444 & T-2445) | Page 2 of 2 | |
| Validity | 24.04.2017 to 23.04.2019 | Last Amended on 08.05.2017 | |
| F | | , | |

| SI. | Product / Material | Specific Test | Test Method Specification | Range of Testing / |
|-----|--------------------|---------------|---------------------------|---------------------|
| | of Test | Performed | against which tests are | Limits of Detection |
| | | | performed | |

MECHANICAL TESTING

| I. | BUILDING MATERIALS | | | |
|----|--------------------------|---|--|---|
| 1. | Cement (OPC 43, OP53, | Fineness by Air Permeability Method | IS 4031 (Part-2) | 2000 cm²/g to 5000 cm²/g |
| | PPC) | Soundness: | | |
| | | Le-Chatelier Method | IS 4031 (Part-3) | 0 to 10 mm |
| | | Autoclave Method | IS 4031 (Part-3) | 0.02 % to 0.80 % |
| | | Setting Time: Initial Setting Time Final Setting Time | IS 4031 (Part-5) (RA 2005) IS 4031 (Part-5) | 5 minutes to 300 minutes 30 minutes to 600 minutes |
| | | Consistency | IS 4031 (Part-4) | 10 % to 40 % |
| | | Compressive Strength | IS 4031 (Part-6) | 10 MPa to 80 MPa |
| | | Drying Shrinkage | IS 4031 (Part-10) | 0.02 % to 0.15 % |