

Laboratory Ishan Calibration and Material Hi-Tech Pvt. Ltd., H.No. 33, Apna Vihar Colony, Kanjwani, Jammu, Jammu & Kashmir

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6542

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Validity 15.11.2017 to 14.11.2019

Last Amended on --

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

MECHANICAL TESTING

| I. | BUILDING MATERIALS | | | |
|----|---------------------------------------|---|--------------------------------------|---|
| 1. | | Initial Setting Time and Final Setting Time | IS 4031 (Part 5) | 5 minutes to 150 minutes 30 minutes to 600 minutes |
| | | Soundness By Le-Chatlier By Autoclave | IS 4031 (Part 3) | 0.5 mm to 10 mm 0.001 % to 0.8 % |
| | | Compressive Strength (72 ± 1) hour (168 ± 2) hour (672 ± 4) hour | IS 4031 (Part 6) | 15 MPa to 70 MPa |
| | | Fineness By Blaine's Air Permeability By Dry Sieving | IS 4031 (Part 2) IS 4031 (Part 1) | 150 m ³ /kg to 400 m ³ /kg 0.05 % to 100 % |
| | | Density | IS 4031 (Part 11) | 2 g/cc to 3.5 g/cc |
| 2. | Bricks & Pre-Casted Blocks | Dimension | IS 1077 IS 13757 IS 12894 | 1220 mm to 5000 mm |
| | | Water Absorption | IS 3495 (Part 2) | 1 % to 40 % |
| | | Efflorescence | IS 3495 (Part 3) | Qualitative |
| | | Compressive Strength | IS 3495 (Part 1) | 5 MPa to 38 MPa |
| 3. | Coarse Aggregate | Flakiness Index | IS 2386 (Part 1) | 5 % to 50 % |
| | | Elongation Index | IS 2386 (Part 1) | 5 % to 50 % |
| | | Bulk Density | IS 2386 (Part 1) | 1 kg/l to 4 kg/l |
| | | Specific Gravity | IS 2386 (Part 1) | 1.5 to 5 |
| | | Water Absorption | IS 2386 (Part 1) | 0.1 % to 5 % |
| | | Crushing Value | IS 2386 (Part 1) | 5 % to 50 % |
| | | Impact Value | IS 2386 (Part 1) | 5 % to 50 % |
| | | Los Angeles Abrasion Value | IS 2386 (Part 1) | 5 % to 50 % |

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| | | 10% Fines Value | IS 2386 (Part 1) | 5 T to 70 T |
| | | Soundness | IS 2386 (Part 1) | 0.1 % to 25 % |
| | | Sieve analysis | IS 383 | 0.1 % to 100 % (6 mm to 125 mm) |
| | | Organic Impurities | IS 2386 (Part 2) | Qualitative |
| | | Deleterious Material Finer than 75 µm | IS 2386 (Part 1) | 0.1 % to 10 % |
| | | Clay Lumps | IS 2386 (Part 2) | 0.1 % to 10 % |
| | | Coal and lignite | IS 2386 (Part 2) | 0.1 % to 2 % |
| 4. | Fine Aggregate | Sieve analysis | IS 2386 (Part 1) | 0.1 % to 100 % (7.5 m to 10 m) |
| | | Organic Impurities | IS 2386 (Part 2) | Qualitative |
| | | Deleterious Material Finer than 75 µm | IS 2386 (Part 1) | 0.2 % to 10 % |
| | | Clay Lumps | IS 2386 (Part 2) | 0.2 % to 10 % |
| | | Coal and lignite | IS 2386 (Part 2) | 0.1 % to 2 % |
| 5. | Hardened Concrete | Compressive Strength | IS 516 | 5 N/mm ² to 80 N/mm ² |
| 6. | Bitumen | Bitumen Content | IRC SP-11 | 2 % to 10 % |
| | | Bulk Density | IS 2386 (Part 3) | 1 g/cc to 4 g/cc |
| | | Gradation | IS 2368 (Part 1) | upto 100 |
| 7. | Kerbstone | Compressive Strength | IS 5785 | 10 N/mm ² to 50 N/mm ² |
| 8. | Paver block | Compressive Strength | IS 15658 | 5 N/mm ² to 90 N/mm ² |
| 9. | Admixture | Slump | IS 1999 | upto 180 mm |
| | | Initial Setting Time | IS 8142 | 1 hour to 15 hour |
| | | Final Setting Time | | |
| | | Compressive strength 1 day, 3 day, 7 day and 28 day | IS 519 | 5 MPa to 100 MPa |
| II. | SOIL AND ROCK | | | |
| 1. | Soil | Consistency | IS 4031 (Part 4) | 20 % to 40 % |
| | | Drying Shrinkage | IS 4031 (Part 10) | 0.01 % to 5 % |

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| | | Specific Gravity | IS 2720 (Part 31 & Sec. 1) | 1 % to 4 % |
| | | Water Content | IS 2720 (Part 2) | Upto 40 % |
| | | Grain Size Analysis | IS 2720 (Part 4) | 75 µm to 4.75 mm |
| | | Liquid Limit | IS 2720 (Part 5) | 10 % to 50 % |
| | | Plastic Limit | IS 2720 (Part 5) | upto 50 % |
| | | Light Compaction Maximum Dry Density Optimum Moisture Content | IS 2720 (Part 7) IS 2720 (Part 8) | 1 g/cc to 3 g/cc 10 % to 50 % |
| | | Heavy Compaction Maximum Dry Density Optimum Moisture Content | IS 2720 (Part 7) IS 2720 (Part 8) | 1 g/cc to 3 g/cc 10 % to 50 % |
| | | California Bearing Ratio | IS 2720 (Part 16) | 1 % to 80 % |

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