

for better building

**DIAMOND CEMENTS (Prop. HEIDELBERGCEMENT INDIA LTD)
DAMOHO UNIT**

TEST REPORT FOR MYCEM

Portland Pozzolana Cement as per IS1489 (Part I):1991

REF.: DC/DMH/QA/2015/47

DATE : 01.01.2016

WEEK NO. : 47

(19.11.15 - 25.11.15)

| CHARACTERISTIC | RESULTS OBTAINED | REQUIREMENT OF IS1489 (Part 1):1991 |
|--|------------------|--|
| (A) CHEMICAL COMPOSITION | | |
| (i) Loss on Ignition % by mass | 2.49 | 5.0, Max. |
| (ii) Magnesia (MgO), % by mass | 2.67 | 6.0, Max. |
| (iii) Sulphuric Anhydride (SO ₃) % by mass | 2.37 | 3.0, Max. |
| (iv) Total Chloride (Cl), % by mass | 0.012 | 0.1, Max. |
| (v) Insoluble Material, % by mass | 33.62 | $\bar{X} + 4.0 \times (100 - \bar{X}) / 100$ Where \bar{X} is the declared % of Fly Ash in the PPC sample |
| (B) PHYSICAL TESTING | | |
| 1. Fineness of Cement | | |
| Sp.Surface blaine (m ² /kg) | 371 | 300 m ² /kg minimum |
| 2. Soundness | | |
| Le-Chatelier Expansion (mm) | 0.5 | 10 mm, Max. |
| Autoclave Expansion (%) | 0.026 | 0.8 %, Max. |
| 3. Setting Time | | |
| Initial (in Minutes) | 170 | 30 minutes, Min. |
| Final (in Minutes) | 225 | 600 minutes, Max. |
| 4. Compressive Strength (MPa) | | |
| (a) At 72 ± 1 Hrs. | 25 | 16 MPa, Min. |
| (b) At 168 ± 2 Hrs. | 35 | 22 MPa, Min. |
| (c) At 672 ± 4 Hrs. | 48 | 33 MPa, Min. |
| 5. Drying Shrinkage (%) | 0.048 | 0.15 %, Max. |
| 6. Declared % of Fly Ash in PPC | 34.93 | 15 - 35 % |

Remarks :

- Temperature during testing - $27 \pm 2^{\circ}$ c.
- The amount of Fly Ash in the finished cement is not varying more than $\pm 3\%$ from the declared value.
- Portland Pozzolana Cement conforms to the requirement of IS 1489 (Part 1):1991 in all respects.


 Head of Quality Control - Damoh