

for better building

HCIL(NGH)-QCD-F026

DIAMOND CEMENTS (Prop. HEIDELBERGCEMENT INDIA LTD)**DAMOH UNIT****TEST REPORT FOR MYCEM**

Portland Pozzolana Cement as per IS1489 (Part I):2015

REF.: DC/DMH/QA/2018/22

DATE : 10.07.2018

WEEK NO. : 22

(28.05.18 - 03.06.18)

| CHARACTERISTIC | RESULTS OBTAINED | REQUIREMENT OF IS1489 (Part 1):1991 |
|--|------------------|--|
| (A) CHEMICAL COMPOSITION | | |
| (i) Loss on Ignition % by mass | 2.53 | 5.0, Max. |
| (ii) Magnesia (MgO), % by mass | 2.92 | 6.0, Max. |
| (iii) Sulphuric Anhydride (SO ₃) % by mass | 2.34 | 3.5, Max. |
| (iv) Total Chloride (Cl), % by mass | 0.014 | 0.1, Max. |
| (v) Insoluble Material, % by mass | 33.53 | $\bar{X} + 4.0 \times (100 - \bar{X}) / 100$ Max |
| | | 0.6 X Min |
| | | 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) | 332 | 300 m ² /kg minimum |
| 2. Soundness | | |
| Le-Chatelier Expansion (mm) | 0.5 | 10 mm, Max. |
| Autoclave Expansion (%) | 0.033 | 0.8 %, Max. |
| 3. Setting Time | | |
| Initial (in Minutes) | 175 | 30 minutes, Min. |
| Final (in Minutes) | 230 | 600 minutes, Max. |
| 4. Compressive Strength (MPa) | | |
| (a) At 72 ± 1 Hrs. | 27 | 16 MPa, Min. |
| (b) At 168 ± 2 Hrs. | 38 | 22 MPa, Min. |
| (c) At 672 ± 4 Hrs. | 48 | 33 MPa, Min. |
| 5. Drying Shrinkage (%) | 0.042 | 0.15 %, Max. |
| 6. Declared % of Fly Ash in PPC | 34.91 | 15 - 35 % |

Remarks :

1. Temperature during testing - $27 \pm 2^\circ$ c.
2. The amount of Fly Ash in the finished cement is not varying more than $\pm 3\%$ from the declared value.
3. Portland Pozzolana Cement conforms to the requirement of IS 1489 (Part 1):2015 in all respects.



Head of Quality Control - Damoh