



WORK TEST CERTIFICATE



## **Portland Pozzolana Cement**

| Despatched during Week No.<br>Test Certificate No.<br>Dated |  | 14                      | From    | 2-Apr-2022 |  | То               | 8-Apr-2022 |
|---|--|-------------------------|---------|------------|--|------------------|------------|
|   |  | 14                      | Referen |            |  | WCW/IMS/QA/FM/18 |            |
|   |  | 7-May-2022              |         | e no.      |  |                  |            |
| S.N.  | Pa   | arameters Resu<br>Obtai |         |            | Requirement as per IS 1489 (Part I) : 2015   |                  |            |
| 1   | Chemical Composition                             |                         |         |            |  |                  |            |
|   | Loss on Ignition (% by mass)                     |                         |         | 2.20       | Not More than 5.0 %  |                  |            |
|   | Magnesia (% by mass)                             |                         |         | 0.90       | Not more than 6.0 %  |                  |            |
|   | Sulphuric Anhydride SO3 (% by mass)              |                         |         | 2.10       | Not More than 3.5 %  |                  |            |
|   | Chloride Content (% by mass)                     |                         |         | 0.01       | Not more than 0.1 % for general purpose & not more than 0.05 % for pre-stressed structures                                 |                  |            |
|   | Insoluble Residue (% by mass)                    |                         |         | 24.46      | Not More than [X + 4.0 (100-X) / 100] &<br>Not less than (0.6 X), Where "X" is the declared<br>Pozzolana content in cement |                  |            |
|   | Physical Analysis                                |                         |         |            | .Į   |                  |            |
| 2   | Fineness   |                         |         |            |  |                  |            |
|   | Blaine's Specific Surface Area (m2 / kg)         |                         |         | 338        | Not Less than 300  |                  |            |
| 3   | Compressive Strengt                              | h (MPa)                 |         |            |  |                  |            |
|   | 72 ± 1h (3 Days)                                 |                         |         | 27.4       | Not less than 16.0   |                  |            |
|   | 168 ± 2h (7 Days)                                |                         |         | 37.9       | Not less than 22.0   |                  |            |
|   | 672 ± 4h (28 Days) *                             |                         |         | 55.4       | Not less than 33.0   |                  |            |
| 4   | Setting Time (Minutes                            | s)                      |         |            |  |                  |            |
|   | Initial  |                         |         | 165        | Not less than 30   |                  |            |
|   | Final  |                         |         | 240        | Not more than 600  |                  |            |
| 5   | Soundness  |                         |         |            |  |                  |            |
|   | Le-Chatelier Expansion (mm)                      |                         |         | 1.00       | Not more than 10.0   |                  |            |
|   | Auto-Clave Expansion (%)                         |                         |         | 0.040      | Not more than 0.8  |                  |            |
| 6   | Drying Shrinkage (%)* Awaited Not more than 0.15 |                         |         |            |  |                  |            |
| 7   | Normal Consistency (%)                           |                         |         | 30.75      |  |                  |            |
|   | Temp. During Testing (0C)                        |                         |         | 27.00      | (27 ± 2)0C   |                  |            |

\* Fly Ash Content in Cement is (%)

The above cement complies with the requirements of IS 1489 (Part I): 2015 for Portland Pozzolana Cement.



34.00

Manager (QA)

DGM QC

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