



# ACC

ACC Limited  
Wadi Cement Works

**WORK TEST CERTIFICATE**



## 53 Grade Ordinary Portland Cement

|   |  |            |               |                  |  |            |
|---|--|------------|---------------|------------------|--|------------|
| Despatched during Week No.<br>Test Certificate No.<br>Dated |  | 26         | From          | 25-Jun-2022      | To   | 1-Jul-2022 |
|   |  | 26         | Reference No. |                  | WCW/IMS/QA/FM/17   |            |
|   |  | 9-Jul-2022 |               |                  |  |            |
| S.N.  | Parameters   |            |               | Results Obtained | Requirement as per IS 269 : 2015<br>(Variety: OPC 53)                                      |            |
| 1   | Chemical Composition   |            |               |                  |  |            |
|   | Lime Saturation Factor<br>( CaO – 0.7 *SO3) / (2.8* SiO2 + 1.2* Al2O3 + 0.65* Fe2O3) |            |               | 0.91             | Not greater than 1.02 and not less than 0.80   |            |
|   | Ratio of % Alumina to that of Iron Oxide<br>Al2O3 / Fe2O3                            |            |               | 1.25             | Not less than 0.66   |            |
|   | Insoluble Residue (% by mass)  |            |               | 1.06             | Not more than 5.0 %  |            |
|   | Magnesia (% by mass)   |            |               | 0.87             | Not more than 6.0 %  |            |
|   | Sulphuric Anhydride (% by mass)  |            |               | 2.92             | Not More than 3.5 %  |            |
|   | Total loss on Ignition (%)   |            |               | 2.01             | Not More than 4.0 %  |            |
|   | Chloride Content (%)   |            |               | 0.010            | Not more than 0.1 % for general purpose & not more than 0.05 % for pre-stressed structures |            |
| Physical Analysis   |  |            |               |                  |  |            |
| 2   | Fineness   |            |               |                  |  |            |
|   | Blaine's Specific Surface Area (m2 / kg)   |            |               | 310              | Not Less than 225  |            |
| 3   | Compressive Strength (MPa)   |            |               |                  |  |            |
|   | 72 ± 1h (3 Days)   |            |               | 38.2             | Not less than 27.0   |            |
|   | 168 ± 2h (7 Days)  |            |               | 47.5             | Not less than 37.0   |            |
|   | 672 ± 4h (28 Days) *   |            |               | Awaited          | Not less than 53.0   |            |
| 4   | Setting Time (Minutes)   |            |               |                  |  |            |
|   | Initial  |            |               | 125              | Not less than 30   |            |
|   | Final  |            |               | 190              | Not more than 600  |            |
| 5   | Soundness  |            |               |                  |  |            |
|   | Le-Chatelier Expansion (mm)  |            |               | 1.00             | Not more than 10.0   |            |
|   | Auto-Clave Expansion (%)   |            |               | 0.060            | Not more than 0.8  |            |
| 6   | Normal Consistency (%)   |            |               | 27.00            |  |            |
|   | Temp. During Testing (0C)  |            |               | 27.00            | (27 ± 2)0C   |            |

The above cement complies with the requirements of IS 269 : 2015 (Variety: OPC 53) for 53 Grade Ordinary Portland Cement

Manager (QA)

DGM QC