

Cement Division Unit of Kesoram Industries Ltd

**VASAVADATTA CEMENT UNIT, SEDAM**

An ISO 9001 / ISO 14001 / IS 18001 Certified Company

**TEST CERTIFICATE**

**43 GRADE**

**ORDINARY PORTLAND CEMENT**

**TEST & COMPLIANCE**

**Week No :5**

**Date: 05-Mar-2022**

| PARTICULARS OF TEST CARRIED OUT                                                                                          | TEST RESULTS OBTAINED | REQUIREMENTS OF IS 269:2015 |              |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------|--------------|
| <b>CHEMICAL ANALYSIS :</b>                                                                                               |                       |                             |              |
| 1. LIME SATURATION FACTOR                                                                                                |                       |                             |              |
| $\frac{\text{CaO} - 0.7 \text{ SO}_3}{2.8 \text{ SiO}_2 + 1.2 \text{ Al}_2 \text{ O}_3 + 0.65 \text{ Fe}_2 \text{ O}_3}$ | 0.90                  | 0.66<br>1.02                | Min.<br>Max. |
| 2. Ratio of % Alumina to that of Iron Oxide $\text{Al}_2 \text{ O}_3 / \text{Fe}_2 \text{ O}_3$                          | 1.30                  | 0.66                        | Min.         |
| 3. Insoluble Residue (% by mass)                                                                                         | 2.18                  | 5.0                         | Max.         |
| 4. Magnesia (% by mass)                                                                                                  | 1.18                  | 6.0                         | Max.         |
| 5. Sulphuric Anhydride (% by mass)                                                                                       | 1.96                  | 3.5                         | Max.         |
| 6. Total Loss on Ignition (%)                                                                                            | 2.74                  | 5.0                         | Max.         |
| 7. Chloride (%)                                                                                                          | 0.02                  | 0.10                        | Max.         |
| <b>PHYSICAL ANALYSIS</b>                                                                                                 |                       |                             |              |
| 1. Fineness ( m <sup>2</sup> /Kg)                                                                                        | 270                   | 225                         | Min.         |
| 2. <u>Setting Time (Minutes)</u>                                                                                         |                       |                             |              |
| a) Initial                                                                                                               | 175                   | 30                          | Min.         |
| b) Final                                                                                                                 | 235                   | 600                         | Max.         |
| 3. <u>Soundness</u>                                                                                                      |                       |                             |              |
| a) Le-chatelier Expansion (mm)                                                                                           | 1.00                  | 10                          | Max.         |
| b) Auto Clave(%)                                                                                                         | 0.12                  | 0.8                         | Max.         |
| 4. <u>Compressive Strength (M Pa)</u>                                                                                    |                       |                             |              |
| a) 72 +/- 1h (3 Days)                                                                                                    | 33.40                 | 23                          | Min.         |
| b) 168 +/- 2 h (7 Days)                                                                                                  | 41.80                 | 33                          | Min.         |
| c) 672 +/- 4h (28 Days)                                                                                                  | 55.80                 | 43<br>58                    | Min.<br>Max. |
| 5. Normal Consistency (%)                                                                                                | 27.75                 |                             |              |
| 6. <u>Performance Improver Added (%)</u>                                                                                 |                       |                             |              |
| a) Lime Stone                                                                                                            | 5.00                  | 5.0                         | Max.         |
| b) Fly Ash                                                                                                               |                       |                             |              |

THE ABOVE CEMENT COMPLIES WITH IS 269:2015 FOR 43 GRADE ORDINARY PORTLAND CEMENT



HOD (QC)