

**Cement Division Unit of Kesoram Industries Ltd**  
**VASAVADATTA CEMENT UNIT, SEDAM**

An ISO 9001 / ISO 14001 / IS 18001 Certified Company

**TEST CERTIFICATE**

**53 GRADE**  
**ORDINARY PORTLAND CEMENT**  
**TEST & COMPLIANCE**

Week No :28

Date: 13-Aug-2022

| PARTICULARS OF TEST CARRIED OUT                                                                                  | TEST RESULTS | REQUIREMENTS OF<br>IS : 269:2015 |
|------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------|
| <b>CHEMICAL ANALYSIS :</b>                                                                                       |              |                                  |
| 1. LIME SATURATION FACTOR                                                                                        | 0.91         | 0.80 Min.                        |
| $\frac{\text{CaO} - 0.7 \text{SO}_3}{2.8 \text{SiO}_2 + 1.2 \text{Al}_2\text{O}_3 + 0.65 \text{Fe}_2\text{O}_3}$ | 1.31         | 1.02 Max.                        |
| 2. Ratio of % Alumina to that of Iron Oxide $\text{Al}_2\text{O}_3 / \text{Fe}_2\text{O}_3$                      | 1.92         | 0.66 Min.                        |
| 3. Insoluble Residue (% by mass)                                                                                 | 1.18         | 5.0 Max.                         |
| 4. Magnesia (% by mass)                                                                                          | 1.95         | 6.0 Max.                         |
| 5. Sulphuric Anhydride (% by mass)                                                                               | 1.75         | 3.5 Max.                         |
| 6. Total Loss on Ignition (%)                                                                                    | 0.01         | 4.0 Max.                         |
| 7. Chloride (%)                                                                                                  | 0.01         | 0.10 Max.                        |
| <b>PHYSICAL ANALYSIS</b>                                                                                         |              |                                  |
| 1. Fineness ( $\text{m}^2/\text{Kg}$ )                                                                           | 289          | 225 Min.                         |
| 2. <u>Setting Time (Minutes)</u>                                                                                 |              |                                  |
| a) Initial                                                                                                       | 150          | 30 Min.                          |
| b) Final                                                                                                         | 205          | 600 Max.                         |
| 3. <u>Soundness</u>                                                                                              |              |                                  |
| a) Le-chatlier Expansion (mm)                                                                                    | 1.00         | 10 Max.                          |
| b) Auto Clave(%)                                                                                                 | 0.13         | 0.8 Max.                         |
| 4. <u>Compressive Strength (M Pa)</u>                                                                            |              |                                  |
| a) 72 +/- 1h (3 Days)                                                                                            | 35.10        | 27 Min.                          |
| b) 168 +/- 2h (7 Days)                                                                                           | 45.20        | 37 Min.                          |
| c) 672 +/- 4h (28 Days)                                                                                          | 60.40        | 53 Min.                          |
| 5. Normal Consistency (%)                                                                                        | 28.25        |                                  |
| 6. Performance Improver Added (%)                                                                                |              |                                  |
| a) Lime Stone                                                                                                    | 5.00         | 5.0 Max.                         |
| b) Fly Ash                                                                                                       |              |                                  |

THE ABOVE CEMENT COMPLIES WITH IS 269:2015 FOR 53 GRADE ORDINARY PORTLAND CEMENT

*Malavika*  
HOD (QC)