



**PNG TAIHEIYO CEMENT LIMITED**

**QUALITY CONTROL SECTION**

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**MONTHLY TEST RESULTS FOR July-2026**

FOR Lae Clinker Grinding & Cement Packing Plant

The following Results of Test conducted in accordance with ASTM C150-20 for Type I, Ordinary Portland Cement (OPC)-Paradise Cement.

**DESCRIPTION OF TEST**

| <b><u>CHEMICAL COMPOSITION</u></b> |                                           | <b><u>ASTM C150</u></b> |     | <b><u>UNIT</u></b> | <b><u>RESULTS</u></b> |
|------------------------------------|-------------------------------------------|-------------------------|-----|--------------------|-----------------------|
| Silicon Dioxide                    | (SiO <sub>2</sub> )                       |                         |     | %                  | 20.31                 |
| Aluminum Oxide                     | (Al <sub>2</sub> O <sub>3</sub> )         |                         |     | %                  | 5.49                  |
| Ferric Oxide                       | (Fe <sub>2</sub> O <sub>3</sub> )         |                         |     | %                  | 3.20                  |
| Calcium Oxide                      | (CaO)                                     |                         |     | %                  | 63.94                 |
| Magnesium Oxide                    | (MgO)                                     | Max.                    | 6.0 | %                  | 1.72                  |
| Sulphur Trioxide                   | (SO <sub>3</sub> )                        | Max.                    | 3.5 | %                  | 2.17                  |
| Loss-On-Ignition                   | (LOI)                                     | Max.                    | 3.5 | %                  | 2.30                  |
| Alkali                             | (0.658K <sub>2</sub> O+Na <sub>2</sub> O) |                         |     | %                  | 0.55                  |
| Phosphorus Pentoxide               | (P <sub>2</sub> O <sub>5</sub> )          |                         |     | %                  | 0.26                  |
| Insoluble Residue                  | (IR)                                      | Max.                    | 1.5 | %                  | 0.07                  |
| Limestone                          |                                           | Max.                    | 5.0 | %                  | 3.3                   |
| L.S.F                              |                                           |                         |     | %                  | 95.2                  |
| S.M                                |                                           |                         |     |                    | 2.34                  |
| I.M                                |                                           |                         |     |                    | 1.72                  |
| C <sub>3</sub> S                   |                                           |                         |     | %                  | 58.3                  |
| C <sub>2</sub> S                   |                                           |                         |     | %                  | 14.2                  |
| C <sub>3</sub> A                   |                                           |                         |     | %                  | 9.1                   |
| C <sub>4</sub> AF                  |                                           |                         |     | %                  | 9.7                   |

**PHYSICAL**

|                               |        |      |      |                    |       |
|-------------------------------|--------|------|------|--------------------|-------|
| Blaine (Air Permeability App) |        | Min. | 2600 | cm <sup>2</sup> /g | 3,400 |
| 45µm Residue                  |        |      |      | %                  | 11.1  |
| Initial Setting Time          |        | Min. | 45   | mins               | 175   |
|                               |        | Max. | 375  | mins               | 268   |
| Water Demand                  |        |      |      | %                  | 24.3  |
| Compressive Strength          | 3Days  | Min. | 12   | N/mm <sup>2</sup>  | 24.6  |
|                               | 7Days  | Min. | 19   | N/mm <sup>2</sup>  | 29.9  |
|                               | 28Days | Min. | 28   | N/mm <sup>2</sup>  | 39.2  |

We hereby certify that the content of the report is correct and accurate and that the paradise cement herein has been made and/or tested in accordance with the above specification and with the requirement of the customers order.

**Date : October 01<sup>st</sup>,2026**

PNG Taiheiyo Cement Limited

Lae Plant

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