

Tanzania Portland Cement Public Limited Company

P.O.Box 1950, Dar es Salaam-Tanzania

Telephone: +255-746 810 930

Fax: +255-746 810 931

[Info@twigacement.com](mailto:Info@twigacement.com)
[www.twigacement.com](http://www.twigacement.com)

# MONTHLY CERTIFICATE OF CHEMICAL & PHYSICAL TESTS

TWIGA MEGA CEM III/B-SR CLASS 42.5N

MAY, 2025

Sampled and tested in accordance with the requirements of the Tanzanian Bureau of Standards

TZS 727-1/ EAS 18-1. Equivalent to EN 197-1

## CHEMICAL TEST RESULTS

| Test                                       | Unit | Test results | Specified requirements |
|--|------|--------------|------------------------|
| Loss on Ignition                           | [%]  | 3.02         | No requirement         |
| Insoluble Residues                         | [%]  | 1.04         | Less than 5.0%         |
| CaO  | [%]  | 47.4         | No requirement         |
| SiO <sub>2</sub>                           | [%]  | 27.2         | No requirement         |
| CaO/SiO <sub>2</sub>                       | [-]  | 1.75         | Not less than 2.0%     |
| Al <sub>2</sub> O <sub>3</sub>             | [%]  | 10.0         | No requirement         |
| Fe <sub>2</sub> O <sub>3</sub>             | [%]  | 2.34         | No requirement         |
| MgO  | [%]  | 4.04         | Not more than 5.0%     |
| SO <sub>3</sub>                            | [%]  | 2.75         | Less than 3.5%         |
| K <sub>2</sub> O                           | [%]  | 0.33         | No requirement         |
| Na <sub>2</sub> O                          | [%]  | 0.17         | No requirement         |
| P <sub>2</sub> O <sub>5</sub>              | [%]  | 0.19         | No requirement         |
| MnO  | [%]  | 0.11         | No requirement         |
| TiO <sub>2</sub>                           | [%]  | 0.59         | No requirement         |
| (Na <sub>2</sub> O+ 0.658K <sub>2</sub> O) | [%]  | 0.36         | No requirement         |
| Cl <sup>-</sup>                            | [%]  | 0.001        | Less than 0.10%        |

## PHYSICAL TEST RESULTS

|                               |                      |      |                           |
|-------------------------------|----------------------|------|---------------------------|
| Density                       | [kg/m <sup>3</sup> ] | 3102 | No requirement            |
| Specific Surface (Blaine)     | [m <sup>2</sup> /kg] | 506  | No requirement            |
| Sieving Residue on 45 mic.    | [%]                  | 5.2  | No requirement            |
| Initial Setting Time          | [Minutes]            | 177  | Not less than 60 minutes  |
| Final Setting Time            | [Minutes]            | 258  | No requirement            |
| Soundness (Expansion)         | [mm]                 | 1.0  | Not more than 10.0 mm     |
| Compressive Strength 2 days   | [MPa]                | 12.5 | More than 10.0 MPa        |
| Compressive Strength 7 days   | [MPa]                | 29.5 | No requirement            |
| Compressive Strength 28 days* | [MPa]                | 50.7 | Between 42.5 and 62.5 MPa |

Remarks: \* The 28 days strength is the average of previous month

Wazo Hill, 2025/06/05<sup>th</sup>
  
Quality Control Manager

  
Plant Manager

  
Commercial Director