

Tanzania Portland Cement Public Limited Company

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## MONTHLY CERTIFICATE OF CHEMICAL & PHYSICAL TESTS

### TWIGA MEGA CEM III/B-SR CLASS 42.5N

SEPTEMBER, 2023

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

TZS 727-1/ EAS 18-1

CHEMICAL TEST RESULTS			
Test	Unit	Test results	Specified requirements
Loss on Ignition	[%]	2.7	No requirement
Insoluble Residues	[%]	1.0	Less than 5.0%
CaO	[%]	49.3	No requirement
SiO <sub>2</sub>	[%]	27.6	No requirement
CaO/SiO <sub>2</sub>	[-]	1.8	Not less than 2.0%
Al <sub>2</sub> O <sub>3</sub>	[%]	10.3	No requirement
Fe <sub>2</sub> O <sub>3</sub>	[%]	2.0	No requirement
MgO	[%]	3.3	Not more than 5.0%
SO <sub>3</sub>	[%]	3.0	Less than 3.5%
K <sub>2</sub> O	[%]	0.34	No requirement
Na <sub>2</sub> O	[%]	0.04	No requirement
P <sub>2</sub> O <sub>5</sub>	[%]	0.06	No requirement
MnO	[%]	0.04	No requirement
(Na <sub>2</sub> O+ 0.658K <sub>2</sub> O)	[%]	0.22	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]	588	No requirement
Sieving Residue on 45 mic.	[%]	7.3	No requirement
Initial Setting Time	[Minutes]	137	Not less than 60 minutes
Final Setting Time	[Minutes]	160	Not Specified
Soundness (Expansion)	[mm]	1.0	Not more than 10.0 mm
Compressive Strength 2 days	[MPa]	13.5	More than 10.0 MPa
Compressive Strength 7 days	[MPa]	23.8	Not Specified
Compressive Strength 28 days*	[MPa]	47.3	Between 42.5 and 62.5 MPa

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

Wazo Hill, 2023/10/06<sup>th</sup>

  
Quality Control Manager

  
Plant Manager

  
Commercial Director

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