



Heidelberg Materials

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## MONTHLY CERTIFICATE OF CHEMICAL & PHYSICAL TESTS

### TWIGA PLUS, CEM II/B-M CLASS 42.5 N

### FEBRUARY, 2026

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	[%]	6.15	No requirement
Insoluble Residues	[%]	1.45	Less than 5.0%
CaO	[%]	55.2	No requirement
SiO <sub>2</sub>	[%]	22.0	No requirement
CaO/SiO <sub>2</sub>	[-]	2.50	Not less than 2.0%
Al <sub>2</sub> O <sub>3</sub>	[%]	5.95	No requirement
Fe <sub>2</sub> O <sub>3</sub>	[%]	4.07	No requirement
MgO	[%]	1.69	Not more than 5.0%
SO <sub>3</sub>	[%]	2.51	Less than 3.5%
K <sub>2</sub> O	[%]	0.40	No requirement
Na <sub>2</sub> O	[%]	0.19	No requirement
P <sub>2</sub> O <sub>5</sub>	[%]	0.55	No requirement
TiO <sub>2</sub>	[%]	0.82	No requirement
MnO	[%]	0.05	No requirement
(Na <sub>2</sub> O+ 0.658 K <sub>2</sub> O)	[%]	0.45	No requirement
Cl	[%]	0.001	Less than 0.10%
PHYSICAL TEST RESULTS			
Density	[kg/m <sup>3</sup> ]	3100	No requirement
Specific Surface (Blaine)	[m <sup>2</sup> /kg]	454	No requirement
Sieving Residue on 45 mic. mesh	[%]	7.9	No requirement
Initial Setting Time	[Minutes]	166	Not less than 60 minutes
Final Setting Time	[Minutes]	215	No requirement
Soundness (Expansion)	[mm]	1.0	Not more than 10.0 mm
Compressive Strength 2 days	[MPa]	18.5	More than 10.0 MPa
Compressive Strength 28* *days*	[MPa]	45.7	Between 42.5 and 62.5 Mpa

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

Wazo Hill, 2026/03/04<sup>th</sup>

  
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 Plant Manager

  
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