

Tanzania Portland Cement Company limited

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MONTHLY CERTIFICATE OF CHEMICAL AND PHYSICAL TESTS TWIGA JENGA MASONRY CEMENT, MC 22.5X

JUNE, 2019

Sampled and tested in accordance with the requirements of European Standard EN 413 – 1: 2004

Test	Unit	Test results monthly average	Specified requirements EN 413-1:2004
Loss on ignition	[%]	16.2	No Requirement
CaO	[%]	58.1	No Requirement
SiO ₂	[%]	15.9	No Requirement
Al_2O_3	[%]	4.1	No Requirement
Fe ₂ O ₃	[%]	2.4	No Requirement
MgO	[%]	0.5	No Requirement
SO ₃	[%]	2.3	Less than 3.0%
Cl	[%]	0.01	Less than 0.10%
Specific Surface (Blaine)	[m²/kg]	504	No Requirement
Sieving Residue on 90 mic.	[%]	2.0	Not more than 15.0 %
Initial setting time	[minutes]	130	Not less than 60 minutes
Soundness (expansion)	[mm.]	1.0	Not more than 10 mm.
Compressive strength 7 days	[MPa]	22.4	More than 10 MPa.
Compressive strength 28 days*	[MPa]	30.2	Between 22.5 and 42.5 MPa

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

Wazo Hill, 2019/07/05th

Quality Control Manager

Quality & Process Control Manager

Commercial Director

Board Directors: Jean-Marc Junon (French) Alfonso Rodriguez (Spanish) Hakan Gurdal (Turkish)

Gary Whitehead (British) Luth Zaipuna (Tanzanian) Oswald Urassa (Tanzanian)