

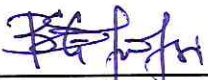
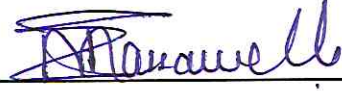


SIMBA
CEMENT
STRENGTH WITHIN

DATE: 01/11/2022

CERTIFICATE OF CHEMICAL & PHYSICAL TESTS (SIMBA Brand Portland Limestone Cement)

Sampled and tested in accordance with the requirements of Tanzania Bureau of Standards 'No. TZS 760'

PARAMETER	TEST RESULTS		SPECIFICATION
			TZS 727-1 = EN 197-1
CHEMICAL TESTS:			CEM II/A-L 42.5N
Loss on Ignition (%)	7.05		
SiO ₂ (%)	18.90		
Al ₂ O ₃ (%)	5.15		
Fe ₂ O ₃ (%)	3.14		
CaO (%)	62.23		
MgO (%)	0.70		5.0 Max.
SO ₃ (%)	2.01		3.5 Max.
K ₂ O (%)	0.09		
Na ₂ O (%)	0.21		
Cl (%)	0.01		0.1 Max
TiO ₂ (%)	0.46		
P ₂ O ₅ (%)	0.05		
Total (%)	<u>100.00</u>		
Insoluble Residue (IR) (%)	2.43		
C3A (%)	8.34		
Freelime (CaO _f) (%)	1.74		
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)	4187		
Compressive Strength (Mpa):	ISO 2days	17.5	≥10 N/mm ²
	ISO 7days	34.9	-
	ISO 28days	48.3	≥42.5 N/mm ² ; ≤62.5 N/mm ²
Vicat test: Initial setting (minutes)	130		≥60 Minutes
Final setting (minutes)	175		-
Expansion (Lechatelier's) (mm)	1.0		10 Max.
Specific gravity (g/cc)	3.0		
REMARKS: The average temperature during the test did not exceed 22°C; corresponding to 71.6°F. The test results shown are monthly composite cement sample for September 2022.			
 _____ PLANT MANAGER	 _____ QUALITY ASSURANCE MANAGER		



TANGA CEMENT PLC

Head Office: Pongwe Factory Area, P O Box 5053, Tanga, Tanzania
Tel : +255 27 2644 500-2 / 2610 600 / 784 644 500, Fax : +255 27 2646 148 / 2646 425

Directors: L Masha (Chairperson)*, P Rutabanzibwa (Deputy Chairperson)*, R Swart (Managing)**,
P de Jager (CFO)**, K Omar*, Rob Wessels**, R Mbilinyi*

Company Secretary: Quresh Ganjee*
*Tanzanian, **South African



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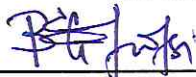
DATE: 01/11/2022

CERTIFICATE OF CHEMICAL & PHYSICAL TESTS (SIMBA Brand Portland Composite Cement)

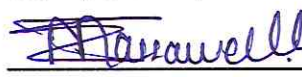
Sampled and tested in accordance with the requirements of Tanzania Bureau of Standards 'No. TZS 760'

PARAMETER	TEST RESULTS		SPECIFICATION
			TZS 727-1 = EN 197-1
CHEMICAL TESTS:			CEM II/B-M 32.5N
Loss on Ignition (%)	7.73		
SiO ₂ (%)	18.78		
Al ₂ O ₃ (%)	5.28		
Fe ₂ O ₃ (%)	3.18		
CaO (%)	61.53		
MgO (%)	0.70		5.0 Max.
SO ₃ (%)	2.00		3.5 Max.
K ₂ O (%)	0.09		
Na ₂ O (%)	0.20		
Cl (%)	0.01		0.1 Max
TiO ₂ (%)	0.46		
P ₂ O ₅ (%)	0.04		
Total (%)	100.00		
Insoluble Residue (IR) (%)	2.62		
C3A (%)	8.62		
Freelime (CaO _f) (%)	1.78		
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)	4296		
Compressive Strength (N/mm ²):			-
ISO 7days	27.7	≥16 N/mm ²	
ISO 28days	37.6	≥32.5 N/mm ² ; ≤52.5 N/mm ²	
Vicat test: Initial setting (minutes)	120	≥75 Minutes	
Final setting (minutes)	148	-	
Expansion (Lechatelier's) (mm)	1.0	10 Max.	

REMARKS: The average temperature during the test did not exceed 22°C; corresponding to 71.6°F.
The test results shown are monthly composite cement sample for September 2022.



PLANT MANAGER



QUALITY ASSURANCE MANAGER



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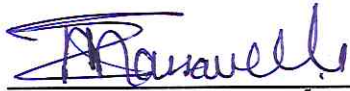


SIMBA
CEMENT
STRENGTH WITHIN

DATE: 01/11/2022

CERTIFICATE OF CHEMICAL & PHYSICAL TESTS
(SIMBA Brand Portland Composite Cement)

Sampled and tested in accordance with the requirements of Tanzania Bureau of Standards 'No. TZS 760'

PARAMETER	TEST RESULTS		SPECIFICATION
			TZS 727-1 = EN 197-1
CHEMICAL TESTS:			CEM II/B-M 32.5R
Loss on Ignition (%)	7.69		
SiO ₂ (%)	18.50		
Al ₂ O ₃ (%)	5.13		
Fe ₂ O ₃ (%)	3.32		
CaO (%)	61.89		
MgO (%)	0.70		5.0 Max.
SO ₃ (%)	1.97		3.5 Max.
K ₂ O (%)	0.10		
Na ₂ O (%)	0.21		
Cl (%)	0.01		0.1 Max
TiO ₂ (%)	0.42		
P ₂ O ₅ (%)	0.06		
Total (%)	100.00		
Insoluble Residue (IR) (%)	2.57		
C3A (%)	7.98		
Freelime (CaO _f) (%)	1.86		
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)	4108		
Compressive Strength (Mpa):	ISO 2days	14.5	≥10 N/mm ²
	ISO 7days	28.0	-
	ISO 28days	38.1	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	106		≥75 Minutes
Final setting (minutes)	140		-
Expansion (Lechatelier's) (mm)	1.0		10 Max.
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