



SIMBA
CEMENT
STRENGTH WITHIN

DATE: 03/09/2022

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

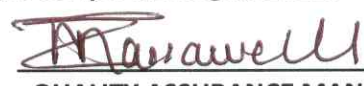
Sampled and tested in accordance with the requirements of Tanzania Bureau of Standards 'No. TZS 760'

PARAMETER	TEST RESULTS	SPECIFICATION
		TZS 727-1 = EN 197-1
CHEMICAL TESTS:		CEM II/B-M 32.5N
Loss on Ignition (%)	8.09	
SiO ₂ (%)	18.50	
Al ₂ O ₃ (%)	5.55	
Fe ₂ O ₃ (%)	2.71	
CaO (%)	61.53	
MgO (%)	0.74	5.0 Max.
SO ₃ (%)	2.24	3.5 Max.
K ₂ O (%)	0.10	
Na ₂ O (%)	0.09	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.40	
P ₂ O ₅ (%)	0.04	
Total (%)	99.99	
Insoluble Residue (IR) (%)	2.62	
C3A (%)	10.13	
Freelime (CaO _f) (%)	1.96	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	4259	
Compressive Strength (N/mm ²):		-
ISO 7days	30.0	≥16 N/mm ²
ISO 28days	37.4	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	122	≥75 Minutes
Final setting (minutes)	156	-
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 August 2022.



PLANT MANAGER



QUALITY ASSURANCE MANAGER



TANGA CEMENT PLC

Head Office:

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Directors:

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

Company Secretary:

Quresh Ganijee*

*Tanzanian, **South African



SIMBA
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STRENGTH WITHIN

DATE: 03/09/2022

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 (%)	7.85		
SiO ₂ (%)	19.09		
Al ₂ O ₃ (%)	5.45		
Fe ₂ O ₃ (%)	2.69		
CaO (%)	61.56		
MgO (%)	0.69		5.0 Max.
SO ₃ (%)	2.02		3.5 Max.
K ₂ O (%)	0.11		
Na ₂ O (%)	0.10		
Cl (%)	0.01		0.1 Max
TiO ₂ (%)	0.39		
P ₂ O ₅ (%)	0.05		
Total (%)	100.00		
Insoluble Residue (IR) (%)	2.59		
C3A (%)	9.90		
Freelime (CaO _f) (%)	1.91		
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)	4290		
Compressive Strength (Mpa):	ISO 2days	14.4	≥10 N/mm ²
	ISO 7days	30.0	-
	ISO 28days	38.7	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	105		≥75 Minutes
Final setting (minutes)	149		-
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 August 2022.			
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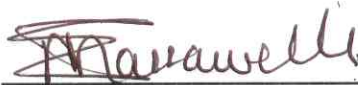


SIMBA
CEMENT
STRENGTH WITHIN

DATE: 03/09/2022

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 CEM II/A-L 42.5N
CHEMICAL TESTS:		
Loss on Ignition (%)	9.92	
SiO ₂ (%)	18.05	
Al ₂ O ₃ (%)	5.53	
Fe ₂ O ₃ (%)	2.66	
CaO (%)	60.15	
MgO (%)	0.72	5.0 Max.
SO ₃ (%)	2.25	3.5 Max.
K ₂ O (%)	0.10	
Na ₂ O (%)	0.24	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.34	
P ₂ O ₅ (%)	0.03	
Total (%)	100.00	
Insoluble Residue (IR) (%)	2.10	
C3A (%)	10.16	
Freelime (CaO _f) (%)	1.82	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	4552	
Compressive Strength (Mpa):	ISO 2days	≥10 N/mm ²
	ISO 7days	-
	ISO 28days	≥42.5 N/mm ² ; ≤62.5 N/mm ²
Vicat test: Initial setting (minutes)	118	≥60 Minutes
Final setting (minutes)	172	-
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 August 2022.		
 PLANT MANAGER	 QUALITY ASSURANCE MANAGER	



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