



SIMBA
CEMENT
STRENGTH WITHIN

DATE: 01/08/2023

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 (%)	10.98	
SiO ₂ (%)	17.11	
Al ₂ O ₃ (%)	4.68	
Fe ₂ O ₃ (%)	2.70	
CaO (%)	61.11	
MgO (%)	0.72	5.0 Max.
SO ₃ (%)	2.10	3.5 Max.
K ₂ O (%)	0.10	
Na ₂ O (%)	0.03	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.36	
P ₂ O ₅ (%)	0.10	
Total (%)	100.00	
Insoluble Residue (IR) (%)	2.51	
C3A (%)	7.84	
Free lime (CaO _f) (%)	2.23	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	4068	
Compressive Strength (N/mm ²):		
ISO 7days	27.5	≥16 N/mm ²
ISO 28days	37.1	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	121	≥75 Minutes
Final setting (minutes)	143	-
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 June 2023.

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:

P Rutabanzibwa (Chairperson)*, R Swart (Managing)***, P de Jager (CFO)***, R Mbilinyi*

Company Secretary:

Quresh Ganjee *

* Tanzanian. ** South African

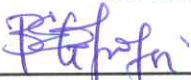
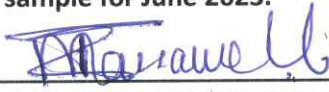


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DATE: 01/08/2023

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 (%)		10.33	
SiO ₂ (%)		17.42	
Al ₂ O ₃ (%)		4.82	
Fe ₂ O ₃ (%)		2.67	
CaO (%)		61.24	
MgO (%)		0.74	5.0 Max.
SO ₃ (%)		2.14	3.5 Max.
K ₂ O (%)		0.11	
Na ₂ O (%)		0.04	
Cl (%)		0.01	0.1 Max
TiO ₂ (%)		0.37	
P ₂ O ₅ (%)		0.11	
Total (%)		100.00	
Insoluble Residue (IR) (%)		2.50	
C3A (%)		8.26	
Freelime (CaO _f) (%)		2.14	
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)		4001	
Compressive Strength (Mpa):	ISO 2days	14.8	≥10 N/mm ²
	ISO 7days	29.1	-
	ISO 28days	38.0	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)		116	≥75 Minutes
Final setting (minutes)		131	-
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 June 2023.			
 PLANT MANAGER		 QUALITY ASSURANCE MANAGER	



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**SIMBA
CEMENT**
STRENGTH WITHIN

DATE: 01/08/2023

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 (%)	9.26	
SiO ₂ (%)	17.68	
Al ₂ O ₃ (%)	4.70	
Fe ₂ O ₃ (%)	2.74	
CaO (%)	62.22	
MgO (%)	0.70	5.0 Max.
SO ₃ (%)	2.09	3.5 Max.
K ₂ O (%)	0.11	
Na ₂ O (%)	0.02	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.38	
P ₂ O ₅ (%)	0.09	
Total (%)	100.00	
Insoluble Residue (IR) (%)	2.48	
C3A (%)	7.82	
Free lime (CaO _f) (%)	2.19	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	4239	
Compressive Strength (Mpa):	ISO 2days	17.8
	ISO 7days	34.9
	ISO 28days	47.4
		≥10 N/mm ²
		-
		≥42.5 N/mm ² ; ≤62.5 N/mm ²
Vicat test: Initial setting (minutes)	110	≥60 Minutes
Final setting (minutes)	130	-
Expansion (Lechatelier's) (mm)	1.0	10 Max.
Specific gravity (g/cc)	3.16	

REMARKS: The average temperature during the test did not exceed 22°C; corresponding to 71.6°F.
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