

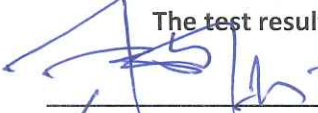
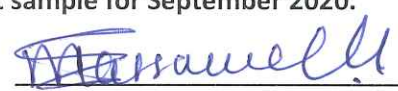


SIMBA
CEMENT
STRENGTH WITHIN

DATE: 05/11/2020

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 (%)	10.18		
SiO ₂ (%)	18.89		
Al ₂ O ₃ (%)	4.75		
Fe ₂ O ₃ (%)	2.55		
CaO (%)	59.76		
MgO (%)	0.76		5.0 Max.
SO ₃ (%)	2.17		3.5 Max.
K ₂ O (%)	0.12		
Na ₂ O (%)	0.02		
Cl (%)	0.01		0.1 Max
TiO ₂ (%)	0.33		
P ₂ O ₅ (%)	0.03		
Total (%)	99.57		
Insoluble Residue (IR) (%)	3.18		
C3A (%)	8.28		
Freelime (CaO _f) (%)	2.19		
PHYSICAL TESTS:			
Air permeability - Blaine (cm ² /g)	3661		
Compressive Strength (Mpa):	ISO 2days	13.6	≥10 N/mm ²
	ISO 7days	27.3	-
	ISO 28days	38.2	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	117		≥75 Minutes
Final setting (minutes)	133		-
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 2020.			
 PLANT MANAGER		 QUALITY ASSURANCE MANAGER	



TANGA CEMENT PLC

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Directors: L. Masha~ (Chairperson), P Rutabanzibwa~ (Deputy Chairperson), R Swart (Managing)**,
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Company Secretary: Quresh Ganijee

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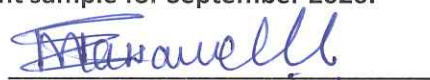


SIMBA
CEMENT
STRENGTH WITHIN

DATE: 05/11/2020

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 (%)	9.20	
SiO ₂ (%)	18.85	
Al ₂ O ₃ (%)	4.72	
Fe ₂ O ₃ (%)	2.56	
CaO (%)	60.45	
MgO (%)	0.78	5.0 Max.
SO ₃ (%)	2.14	3.5 Max.
K ₂ O (%)	0.14	
Na ₂ O (%)	0.02	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.33	
P ₂ O ₅ (%)	0.03	
Total (%)	99.23	
Insoluble Residue (IR) (%)	3.27	
C3A (%)	8.18	
Freelime (CaO _f) (%)	2.16	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	3751	
Compressive Strength (N/mm ²):		-
ISO 7days	25.8	≥16 N/mm ²
ISO 28days	36.5	≥32.5 N/mm ² ; ≤52.5 N/mm ²
Vicat test: Initial setting (minutes)	114	≥75 Minutes
Final setting (minutes)	129	-
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 2020.		
 PLANT MANAGER	 / QUALITY ASSURANCE MANAGER	



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Quresh Ganijee

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SIMBA
CEMENT
STRENGTH WITHIN

DATE: 05/11/2020

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 (%)	5.25	
SiO ₂ (%)	20.87	
Al ₂ O ₃ (%)	5.28	
Fe ₂ O ₃ (%)	2.79	
CaO (%)	62.01	
MgO (%)	0.79	5.0 Max.
SO ₃ (%)	2.08	3.5 Max.
K ₂ O (%)	0.14	
Na ₂ O (%)	0.03	
Cl (%)	0.01	0.1 Max
TiO ₂ (%)	0.36	
P ₂ O ₅ (%)	0.03	
Total (%)	99.64	
Insoluble Residue (IR) (%)	2.75	
C3A (%)	9.28	
Freelime (CaO _f) (%)	2.08	
PHYSICAL TESTS:		
Air permeability - Blaine (cm ² /g)	3828	
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)	120	≥60 Minutes
Final setting (minutes)	156	-
Expansion (Lechatelier's) (mm)	2.0	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 2020.


PLANT MANAGER


QUALITY ASSURANCE MANAGER



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