

1. **COMMODITY : CEMENT CLINKER IN BULK**
2. **ORIGIN : VIETNAM**
3. **SPECIFICATION : AS ATTACHED ANNEX. 1**

No.	Characteristics	Requirement
1	Moisture	$\leq 1\%$
2	Content of free lime (f.CaO)	$\leq 1.5\%$
3	Chemical composition	
3.1	SiO ₂	18 - 26
3.2	Al ₂ O ₃	3 - 8
3.3	Fe ₂ O ₃	2 - 5
3.4	CaO	65% MINIMUM
3.5	MgO	≤ 3
3.6	SO ₃	≤ 0.75
3.7	Na ₂ O td = Na ₂ O + 0,658 K ₂ O	$\leq 0.6\%$
3.8	Loss on ignition (LOI)	≤ 1.0
3.9	Insoluble residue content (RI)	≤ 0.75
4	C3S	55% MIN
	C2S	10-22%
	C4AF	8% – 12%
	LSF	0.92 – 1.02

4.

ITEMS	UNIT	TEST METHOD	RANGE
CHEMICAL PROPERTIES –			
CAO	%	ASTM C114	65 MIN
SiO ₂	%	ASTM C114	20 – 22.5
Al ₂ O ₃	%	ASTM C114	4.5 – 6.5
Fe ₂ O ₃	%	ASTM C114	2.8 – 4.5
MGO	%	ASTM C114	4.0 MAX.
FREE LIME (F-CAO)	%	ASTM C114	1.5 MAX
SO ₃	%	ASTM C114	1.0 MAX
INSOLUBLE RESIDUE (IR)	%	ASTM C114	1.0 MAX
LOI	%	ASTM C114	1.5 MAX
MOISTURE OF CLINKER	%	TCVN 7024	1.0 MAX
C ₃ S	%	ASTM C150	58 MIN
C ₂ S	%	ASTM C150	21.5 MAX
C ₃ A	%	ASTM C150	12 MAX
C ₄ AF	%	ASTM C150	13 MAX
LIME SATURATION FACTOR	%	CALCULATED	92 MIN
PARTICLE–			
5MM – 25MM	%	BY SIEVE	MORE THAN OR EQUAL TO 40