

■ **Chemical Requirements**

	ASTM C114		
Silicon dioxide	(SiO ₂)	%	-
Aluminium oxide	(Al ₂ O ₃)	%	-
Ferric oxide	(Fe ₂ O ₃)	%	-
Calcium oxide	(CaO)	%	-
Magnesium oxide	(MgO)	%	max 6.0
Sulfur trioxide	(SO ₃)	%	max 2.3
Loss of ignition	(LOI)	%	max 3.0
Insoluble residue	(IR)	%	max 0.75
Tricalcium silicate	(C ₃ S)	%	-
Tricalcium aluminate	(C ₃ A)	%	max 5.0
Total Alkalies (Na ₂ O + 0.658 K ₂ O)		%	max 0.6
C ₄ AF + 2C ₃ A		%	max 25

■ **Physical Requirements**

Fineness ; Specific surface Air permeability test	ASTM C 204	m ² /kg	min 280
Soundness : Autoclave expansion	ASTM C 151	%	max 0.8
Time of setting ; Vicat test;	ASTM C 191		
initial set		mins	min 45
final set		mins	max 375
Air content of mortar volume	ASTM C 185	%	max 12
*False set	ASTM C 451	%	min 50
Compressive Strength ; Mortar cubes;	ASTM C 109	psi (MPa)[ksc]	
1 day			-
3 days			min 1160 (8.0)[82]
7 days			min 2180 (15.0)[153]
28 days			min 3050 (21.0)[214]

Remark : * Means Optional Requirements