

■ **Chemical Requirements**

	ASTM C 114		
Silicon dioxide	(SiO <sub>2</sub> )	%	-
Aluminium oxide	(Al <sub>2</sub> O <sub>3</sub> )	%	-
Ferric oxide	(Fe <sub>2</sub> O <sub>3</sub> )	%	-
Calcium oxide	(CaO)	%	-
Magnesium oxide	(MgO)	%	max 6.0
Sulfur trioxide	(SO <sub>3</sub> )	%	max 3.5
Loss of ignition	(LOI)	%	max 3.0
Insoluble residue	(IR)	%	max 0.75
Tricalcium silicate	(C <sub>3</sub> S)	%	-
Tricalcium aluminate	(C <sub>3</sub> A)	%	max 15
Total Alkalies (Na <sub>2</sub> O + 0.658 K <sub>2</sub> O)		%	max 0.6

■ **Physical Requirements**

Fineness ; Specific surface Air permeability test	ASTM C 204	m <sup>2</sup> /kg	-
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			min 1740 (12.0)[122]
3 days			min 3480 (24.0)[245]
7 days			-
28 days			-

**Remark : \* Means Optional Requirements**