

Quality Certificate

Cement Specifications : Type I - 42.5

Product day:

Chemical composition

	Amount	INSO		Amount	INSO389
Silicon dioxide %SiO ₂	20.5 - 21.5	-----	Insotuble Residue %I.R	0.30 - 0.50	<1.5%
Aluminium Oxide %Al ₂ O ₃	4.00 - 5.50	-----	Free Lime %Free CaO	0.80 - 1.70	-----
Ferric Oxide %Fe ₂ O ₃	3.60 - 4.50	-----	Lime Saturation Factor LSF	93.0 - 95.0	-----
Calcium Oxide %CaO	63.0 - 64.5	-----	Silica Module SLM	2.30 - 2.50	-----
Magnesium Oxide %MgO	3.00 - 4.00	<6.0	Alomina Moddule ALM	1.10 - 1.30	-----
Sulphur Trioxide %SO ₃	1.50 - 2.30	<3.0	Tricalcium Silicate %C ₃ S	53.0 - 56.0	-----
Potassium Oxide %K ₂ O	0.60 - 0.75	-----	Dicalcium Silicate %C ₂ S	12.0 - 18.0	-----
Sodium Oxide %Na ₂ O	0.45 - 0.65	-----	Tricalcium Aluminate %C ₃ A	5.50 - 7.00	-----
Loss On Ignition %L.O.I	1.00 - 2.50	<3.0	Tetracalcium Aluminoferris %C ₄ AF	11.0 - 13.0	-----

Physical Test

	UNIT	Amount	INSO 389
Blaine Test	(m ² /kg)	320-340	260-360
Autoclave Expansion	(%)	0.09 - 0.20	<0.8
Setting Time:			
Initial	(Minute)	120 - 170	>45
Final	(Minute)	200 - 300	<375
Compressive Strength :			
After 2 Days	Mpa	25-30	>10
After 28 Days	Mpa	44 - 48	42.5-62.5

REMARKS:

LSF = 100 (CaO - 0.7 SO₃) / (2.80 SiO₂ + 0.65 Fe₂O₃ + 1.18 Al₂O₃)C₃S = 4.07 CaO - (7.6 SiO₂ + 6.718 Al₂O₃ + 1.43 Fe₂O₃ + 2.852SO₃)C₂S = 2.867SiO₂ - 0.754 C₃SC₃A=2.65 Al₂O₃ - 1.692 Fe₂O₃C₄AF = 3.043 Fe₂O₃