PORTLAND POZZOLANA CEMENT

Max Cement advantages -
Typical Engineering Properties of Portland Pozzolana Cement

PORTLAND POZZOLANA CEMENT REQUIREMENTS AS PER IS:1489 (Part-I)

PHYSICAL REQUIREMENTS, (As per BIS)

FINENESS		MAX Cement Performance	MAXIMUM ADVANTAGES FOR CONSTRUCTION
Specific Surface(m2/kg)	more than 300 m2/kg	380 m2 /Kg	Faster Strength Gaining

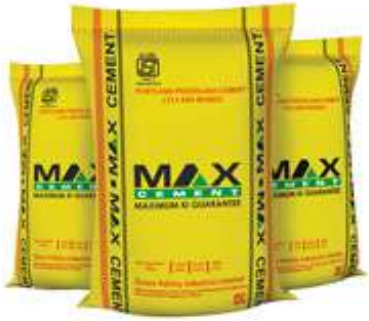
SOUNDNESS (in m2/Kg.)		MAX Cement Performance	MAXIMUM ADVANTAGES FOR CONSTRUCTION
Le-Chatelier Expn.(mm)	maximum 10 mm	2-3 mm	Better Durability
Autoclave Expn.(%)	less than 0.35 % maximum 0.8%	0.35%	Better Durability

SETTING TIME (minutes)		MAX Cement Performance	MAXIMUM ADVANTAGES FOR CONSTRUCTION
Initial Setting Time	more than 30 minutes	135 min	Gives more time to use mortar and concrete
Final Setting Time	less than 600 minutes	195 min	Early deshuttering advantages

CHEMICAL REQUIREMENTS		MAX Cement Performance	MAXIMUM ADVANTAGES FOR CONSTRUCTION
Loss on Ignition (LOI), % by mass	Less than 5.0 %	1.28%	Fresh cement with intact engineering properties
Magnesia(MgO), by mass	Less than 6.0 %	1.38%	Prevents delayed cracks
Sulphur Calculated as SO_3 by mass	Less than 3.5 %	1.86%	Optimum setting of paste
Insoluble Ratio	X + 4.0(100-X)/100 Max. X x 0.6 Min.	18%	Assured quality of clinker for quality cement
Chloride % by Mass	less than 0.05% (for cement used in special structures like pre-stressed concrete)	0.027%	Extended Duarability

COMPRESSIVE STRENGTH (MPa)		MAX Cement Performance	MAXIMUM ADVANTAGES FOR CONSTRUCTION
At 3 Days	more than 16 Mpa	21.6 Mpa	Higher Initial Strength
At 7 Days	more than 22 Mpa	32.3 Mpa	Higher Initial Strength
At 28 Days	more than 53 Mpa	54 Mpa	Higher Final Strength
At 3 Days	more than 16 Mpa	0.02%	Crack resistance and better durabilty
Dying shrinkage(%)	less than 0.15%		
Fly Ash used as Pozzolana, % of PPC	more than 53 Mpa	24%	Better workability & reduces cement consumption for Design Mix of Concrete (Higher Compressive strength using lesser quantity of cement)

WITH THE POWER OF 3S
STRENGTH • SETTING • STABILITY



PPC BIS requirements vs. MAX Cement performance for Compressive Strength