TEST REPORT

(CONCARE ANTICORROSIVE ADMIXTURE)

TESTED BY
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I. RESULTS OF PHYSICAL CHARACTERISTICS OF CEMENT, WITH AND WITH OUT CONCARE:

SL.No	Characteristics	Cement	Cement + Concare
1	Standard Consistency	30.80%	30.30%
2	Setting Time :- (i) initial setting time in minutes. (ii) final setting time in minutes.	 117 160	 105 135
3	Compressive Strength at the age of (i) 3 days in Kgs/cm2 (ii) 7 days " (iii) 28 days "	 269 327 438	 285 334 440

II. IMMERSION OF STEEL REINFORCEMENT IN WATER AND CHLORIDE SOLUTIONS WITH AND WITHOUT THE ADMIXTURE (CONCARE) AND OBSERVATION OF CORROSION :-

For observing the corrosion of steel reinforcement, a comparative study of immersion of steel reinforcement separately in water with and without adding concarc has been carried out. Similarly the effect of corrosion has also been observed by preparing 1% and 5% Chloride Solutions and immersing the steel reinforcement separately in dishes, one with adding concare and the other without adding concare. The photographs taken at different days of immersion of steel reinforcement in water and chloride solutions of 1% and 5% concentration are shown in photos 1 to 9. The photos indicate that the corrosion is high in ihe steel reinforcement which is immersed either in plain water or Chloride Solution when compared with the steel reinforcement immersed in the water (With the admixture concare) and Chloride Solutions (with the admixture concare)

RESULTS OF IMMERSION OF STEEL REINFORCEMENT IN WATER AND CHLORIDE SOLUTIONS AFTER 30 DAYS. (WEIGHT LOSS RESULTS)

S.No.	Particulars	With Concare			With out Concare		
		Initial Weight (gms)	Final Weight (gms)	Weight Loss (gms)	Initial Weight (gms)	Final Weight (gms)	Weight Loss (gms)
1.	Steel reinforcement (Steel Rod) immersed in plain water.	371.70	371 70	0	373.50	371.60	0.508
2.	Steel reinforcement (Steel Rod) immersed in 1% Chloride Solution.	560.50	560.40	0	558.90	554.80	0.733
3	Steel reinforcement (Steel Rod) immersed in 5% Chloride Solution.	375.40	375.20	0.053	374.20	370.80	0.908

III. PULL OUT TEST OF STEEL REINFORCEMENT EMBEDDED IN CEMENT CONCRETE CUBE, CASTED WITH AND WITHOUT THE ADMIXTURE CONCARE AND CURING FOR 14 DAYS :

A nominal C.C. mix of 1:2:4 with water cement ratio (W.C) of 0.5 and 20mm M.S. A. has been taken and one set of 6" cubes have been casted with steel rod of 20mm dia and 1 meter length centrally placed in the cube. Another set of cubes also has been casted in the same way with the admixture (Concare). The photographs taken at the time of casting the 2 sets of C.C cubes with embedded steel rods are shown in photos 10 and 11. The photograph. No. 12 shows the pall out test of steel

Rod carried out on the Universal Testing Machine. The Two sets have been cured for 14 days under different conditions and the pull out test conducted. The average load at which the failure occurred in both the cases is given below, which indicates that the C.C. Cubes casted with centrally embedded steel rods with concare have higher pull out strength.

The above testes indicate that the concare has higher corrosion resistant properties.

S.No.	Particulars	With Concare	Without Concare
1.	Load at which the pull out occurred i.e. failure load in Kgs.	8867	8217

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