



सीएसआईआर-केन्द्रीय विद्युतरसायन अनुसंधान संस्थान
CSIR-CENTRAL ELECTROCHEMICAL RESEARCH INSTITUTE
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद् Council of Scientific & Industrial Research)
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CSIR-CECRI

Touching Lives Through Electrochemistry.

REPORT

2.2 Functional group based on infrared analysis

<i>Wave No. (cm⁻¹)</i>	<i>Functional groups</i>
3660-2649	O-H and N-H stretching groups
2920-2950	Asymmetrical stretching of CH ₂ & CH ₃ and also to N-H vibrations
2863	Stretching of CH ₃
1733	C=O carboxyl stretching vibrations
1598	Vibration of (COO ⁻) ionic carboxyl group and N-H deformation modes in the NH ₂ group
1476 and 1373	Stretching and bending modes of aliphatic C-H
1196	C-N stretch secondary amine
1107	C-O-C group

2.3 Residue by oven drying method

Percentage residue	5-6%	< 12% as recommended by ASTM C494 / C494M - 05a
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3. Corrosion experiments

- Visual examination of the surface condition of rebars showed that, the corroded area of the rebar embedded in concrete containing Primadonn Classic Dura Conguard inhibitor was less than that of the rebar embedded in concrete cast without inhibitor.
- Addition of Primadonn Classic Dura Conguard inhibitor showed tendency to decrease the corrosion potential values.
- The Primadonn Classic Dura Conguard inhibitor improved the corrosion behavior of the embedded steel rebars in concrete by delaying the initiation of corrosion with an efficiency of 85%.

----- End of Report -----

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