

Resistance To Polarization

ASTM G59 STANDARD TEST METHOD FOR CONDUCTING POTENTIODYNAMIC POLARIZATION RESISTANCE MEASUREMENTS

Measuring a Doxsteel Fastener’s resistance to polarization tells us how long it will take to react to its environment and corrode. The slower a fastener polarizes, the longer it will last, which makes this test one of the most important that we conduct.

By measuring targeted sections of the fastener to determine its resistance to polarization, we can determine its rate of corrosion per year of standard service. This is how we guarantee that our fasteners will not seize for five years, and why we estimate that they can last as long as 21 years.

COATINGS EVALUATIONS ELECTROCHEMICAL TEST ASTM G59

COATING	CORROSION RATE (mm/year) Best results reported	CORROSION RATE (mm/year) Average 200
Cadmium Plating	5	28.5
Hot Dip Zinc	50	136
Zinc Plating	20	146
Zinc Plating + PTFE	1.9	5.3
Ceramic + PTFE	1.8	10
Zn-Ni plating	7	15
Doxsteel Fasteners	0.16	0.45

ASTM G59 TEST	CORROSION RATE (mm/year)	TIMES BETTER
Competitor Best	1.8	
Doxsteel Best	0.16	11.25
Doxsteel Average	0.45	4