

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.

SPECIMEN	(CM2)	Ecorr (mV) VS Ag/AgCl 5 min	Ecorr (mV) vs Ag/AgCl 55 min	(μ A)	(Ω)	(Ω *cm2)	(mppy)	(mpy)
Doxsteel Coated Fasteners	110	-0.221	-0.199	1.528	17188	1890717	0.0001	0.00059
Cadmium Coated Fasteners	110	-0.709	-0.708	245	110	12063	0.0473	1.8606
Doxsteel Coated Wrenching Flat	2.5	-0.173	-0.148	0.081	355417	888542	0.00034	0.0137
Cadmium Coated Wrenching Flat	2.5	-0.687	-0.687	5.428	4841	9682	0.0577	2.2703
Doxsteel Coated Nut Thread	15.5	-0.286	-0.310	1.241	252325	392532	0.0009	0.0340
Cadmium Coated Nut Thread	15.5	-0.713	-0.710	13.583	2000	3100	0.0186	0.7331

SALT FOG TEST	
Competitor Best	10.4
Doxsteel Best	10.2
Doxsteel Average	7.3

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