



# MIXED METAL OXIDE ELGARD 300 ANODE MESH



REVISION 1

ELGARD™ Anode mesh is composed of a precious metal oxide catalyst sintered to an expanded Titanium mesh substrate. The Anode Mesh is used as a key component in the Cathodic Protection of Reinforced Concrete Structures.

## MATERIAL SPECIFICATIONS

ANODE PERFORMANCE	
Current rating @ 110 mA/m <sup>2</sup> (10 mA/ft <sup>2</sup> )	37.8 mA/m <sup>2</sup> (3.44 mA/ft <sup>2</sup> )
Expected life (NACE Standard TMO2944-94)	75 Years
Catalyst	Iridium Based Mixed Metal Oxide
Maximum anode concrete interface current density :	
FHWA limit	110 mA/m <sup>2</sup> (10 mA/ft <sup>2</sup> )
Short-term limit	220 mA/m <sup>2</sup> (20 mA/ft <sup>2</sup> )
NOMINAL DIMENSIONS	
Width of roll	1.22 m (4 ft)
Length of roll	76 m (250 ft)
Area per roll	92.9 m <sup>2</sup> (1000 ft <sup>2</sup> )
Actual anode surface per unit area of concrete	0.34 m <sup>2</sup> /m <sup>2</sup> (0.34 ft <sup>2</sup> /ft <sup>2</sup> )
Expanded thickness	1.981 mm (0.078 ")
Diamond dimensions	25 x 51 x 0.89 mm (0.923 " x 2.0 " x 0.035 ")
Shipping weight per coil	43 kg (95 lbs)
SUBSTRATE	
Composition	Titanium, Grade 1 per ASTM B265
Coefficient of thermal expansion	8.7 x 10 <sup>-5</sup> /°K (0.0000048/in/in/°K)
Thermal conductivity @ 20°C	15.6W/ m <sup>2</sup> - °K (9.0BTU/hr/ft <sup>2</sup> /°F/ft)
Electrical resistivity	0.000056 Ohm-cm (0.000022 Ohm-in)
Modulus of elasticity	105 GPa (14,900,000 PSI) minimum
Tensile strength	245 MPa (35,000 PSI) minimum
Yield strength	175 MPa (25,000 PSI) minimum
Elongation	24% minimum
ELECTRICAL PROPERTIES	
Anode mesh resistance lengthwise	0.027 Ohm/m (0.008 Ohm/ft)
Current distributor resistance lengthwise	0.049 Ohm/m (0.015 Ohm/ft)
Resistance width wise c/w current distributor	0.013 Ohm/m (0.004 Ohm/ft)