



MIXED METAL OXIDE ELGARD 170 RIBBON MESH

REVISION 1

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

MATERIAL SPECIFICATIONS

ANODE PERFORMANCE	
Current rating @ 110 mA/m ² (10 mA/ft ²)	5.3 mA/m (1.62 mA/ft)
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 ² (10 mA/ft ²)
Short-term limit	220 mA/m ² (20 mA/ft ²)
NOMINAL DIMENSIONS	
Width	20 mm (0.8 ")
Coil length	76 m (250 ft)
Actual anode surface per unit length of anode	0.05 m ² /m (0.082 ft ² /ft)
Expanded thickness	1.30 mm (0.051")
Diamond dimensions	2.5 x 4.6 x 0.6 mm (0.10 " x 0.18 " x 0.025 ")
Shipping weight per coil	2.9 kg (6.38 lbs)
SUBSTRATE	
Composition	Titanium, Grade 1 per ASTM B265
Coefficient of thermal expansion	8.7 x 10 ⁻⁵ /°K (0.000048/in/in/°K)
Thermal conductivity @ 20°C	15.6W/ m ² - °K (9.0BTU/hr/ft ² /°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
CURRENT DISTRIBUTOR	
Width	12.70 mm (0.5 ")
Thickness	0.90 mm (0.035 ")
Coil length	76 m (250 ft)
Shipping weight per coil	3.9 kg (8.6 lbs)
ELECTRICAL PROPERTIES	
Anode ribbon mesh resistance lengthwise	0.25 Ohm/m (0.07 Ohm/ft)
Current distributor resistance lengthwise	0.049 Ohm/m (0.015 Ohm/ft)