



Betelguard Titanium Anode Mesh 210 is a key component for Cathodic Protection systems in reinforced concrete structures. It is composed of a precious metal oxide catalyst sintered to an expanded titanium mesh substrate.

### Anode Performance

Current rating at 110 mA/m <sup>2</sup> (10 mA/ft <sup>2</sup> )	24.4 mA/m <sup>2</sup> (2.22 mA/ft <sup>2</sup> )
Expected life (NACE Standard TM02944-94)	75 years
Catalyst 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> )

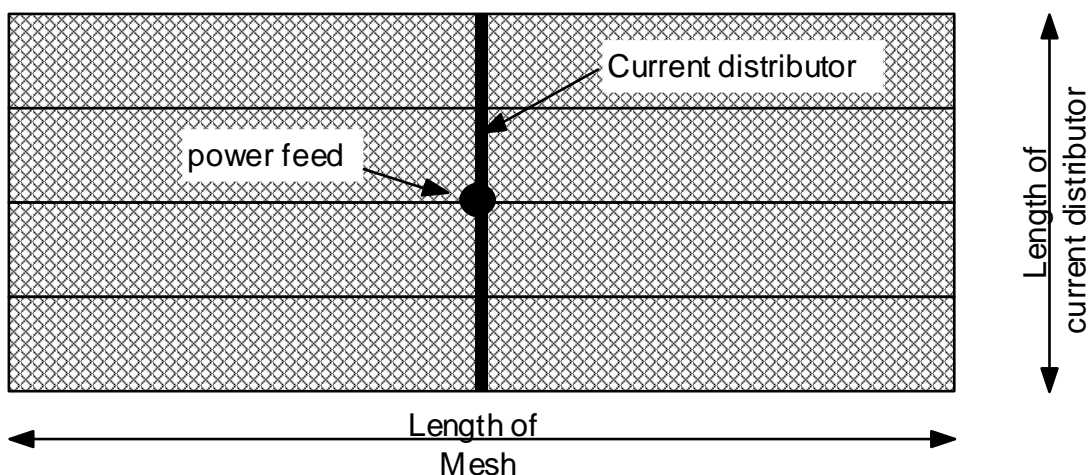
### Dimensions

Width of roll	1.22 m (4 ft)
Length of roll	76 m (250 ft)
Area per roll 92.9 m <sup>2</sup> (1,000 ft <sup>2</sup> )	
Actual anode surface per unit area of concrete	0.22 m <sup>2</sup> /m <sup>2</sup> (0.22 ft <sup>2</sup> /ft <sup>2</sup> )
Expanded thickness	1.981 mm (0.078")
Diamond dimensions	34 mm x 76 mm x 0.89 mm (1-1/3" x 3" x .035")

### Electrical Properties

Anode resistance lengthwise	0.046 ohm/m (0.014 ohm/ft)
Current distributor resistance lengthwise	0.049 ohm/m (0.015 ohm/ft)
Resistance widthwise w/ current distributor	.0016 ohm/m (0.005 ohm/ft)

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When the power feed is at the center of a rectangular area, as shown above, proper anode design may be obtained from the tables below. This layout constitutes a building block for larger structures which should be subdivided into elements which fit the constraints of the tables below.

## Metric Units

Length of Mesh (meter)	Length of Current Distributor (widths of mesh / meter)	Area (m <sup>2</sup> )
41.1	4 / 4.88	200
39.6	5 / 6.10	240
37.5	6 / 7.32	273
35.4	7 / 8.54	300
32.9	8 / 9.76	320
30.5	9 / 10.98	333
27.7	10 / 12.20	341
25.6	11 / 13.42	343
23.2	12 / 14.64	341
21.0	13 / 15.86	336
19.2	14 / 17.08	328
17.4	15 / 18.30	319
15.5	16 / 19.52	309
14.3	17 / 20.74	298
12.8	18 / 21.96	287
11.9	19 / 23.18	277
10.7	20 / 24.40	266
9.8	21 / 25.62	256
9.1	22 / 26.84	246

## English Units

Length of Mesh (feet)	Length of Current Distributor (widths of mesh / feet)	Area (ft <sup>2</sup> )
135	4 / 16	2,166
130	5 / 20	2,592
123	6 / 24	2,950
116	7 / 28	3,234
108	8 / 32	3,445
100	9 / 36	3,584
91	10 / 40	3,658
84	11 / 44	3,677
76	12 / 48	3,650
69	13 / 52	3,589
63	14 / 56	3,503
57	15 / 60	3,400
51	16 / 64	3,288
47	17 / 68	3,171
42	18 / 72	3,054
39	19 / 76	2,938
35	20 / 80	2,825
32	21 / 84	2,718
30	22 / 88	2,615