

## IMPRESSED CURRENT ANODES

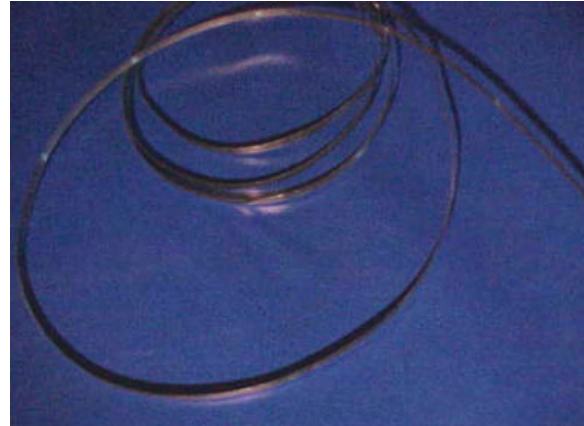
# Mixed Metal Oxide

## Ribbon Anodes

### Protection For Aboveground Tank Bottoms

Cathodic protection is an economical method for controlling corrosion on aboveground storage tank bottoms. While sacrificial systems can be used, impressed current designs have proven to be more effective and easier to install. To address this particular application, Corrpro manufactures impressed-current tank bottom anodes that employ a patented grid-shape geometry. The anodes are composed of a titanium-ribbon substrate coated with a mixed-metal-oxide catalyst. Because the titanium substrate is naturally passivated by an oxidizing film, the ribbon anode remains dimensionally stable over time. Direct current transfer is accomplished through the mixed-metal-oxide catalyst, which is highly conductive, and fully oxidized so that higher current outputs are possible. This two-part composition allows for a maximum current density of 5.0 mA/ft. to achieve a 50-year design life.

In addition to compositional advantages, the unique configuration of Corrpro's anodes offers numerous other benefits. Spacing between the metal anode strips can be adjusted to achieve various design-life requirements. The anodes can also be easily cut so that placement may be made under all areas of the tank. Because the strips are electrically continuous, multiple paths are available for current flow. This in turn lowers the driving voltage required for protection, and provides the anode with



redundant electrical connections for increased reliability. Greater dependability is also achieved through the elimination of all field splices.

### Typical Applications

Corrpro's mixed-metal-oxide ribbon anodes are designed for use on both newly constructed aboveground storage tanks with secondary containment liners, and existing tanks utilizing double-bottom construction. Unlike other impressed-current tank bottom anodes, Corrpro's ribbon anodes do not require coke breeze. They can be used in sands with various levels of moisture and salt contents, and can be designed to provide effective protection for 50 years and more.

### CHEMICAL COMPOSITION

Substrate	Catalyst
ASTM B-265 Grade 1 Titanium	Mixed Metal Oxide



### Corrpro Companies Europe Limited

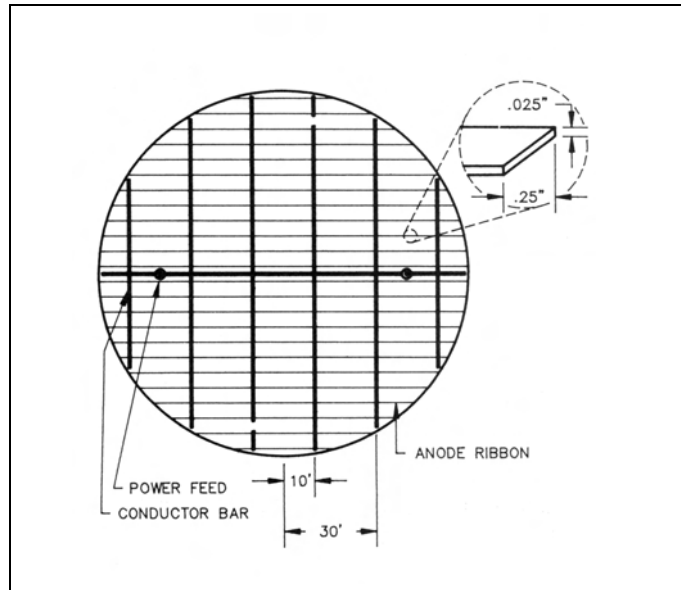
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## Mixed Metal Oxide Ribbon Anodes

### Ordering Procedure

Corrpro's mixed metal oxide anodes deliver long-term protection to aboveground storage tank bottoms. To order the required anode material for your structure, indicate that you need a mixed-metal-oxide ribbon anode, and specify the number of lineal feet desired. The anode ribbon is available standard in 500-foot reels. The conductor bar is stocked in 250-foot reels. An example is provided to help illustrate this process.

Ordering Procedure Example	
ITEM	EXAMPLE
Anode Material	<i>Ribbon Mixed Metal Oxide</i>
Anode Ribbon Width	<i>0.25 in.</i>
Lineal Feet of Anode (500-ft. Reels = Standard)	<i>500 ft.</i>
Lineal Feet of Conductor Bar (300-ft. Reels = Standard)	<i>250 ft.</i>



### Standard Dimensions and Shipping Weights

COMPONENT	NOMINAL DIMENSIONS				NOMINAL BARE WT. lbs./ft. (kg/m)
	WIDTH		THICKNESS		
	in.	(mm)	in.	(mm)	
<i>Anode Ribbon</i>	<i>0.25</i>	<i>(6.4)</i>	<i>0.025</i>	<i>(0.6)</i>	<i>6 lbs./500 ft. (4.5 kg/152 m)</i>
Anode Ribbon	0.5	(12.7)	0.025	(0.6)	10 lbs./500 ft. (3.0 kg/152 m)
Conductor Bar	0.5	(12.7)	0.040	(1.0)	0.4 lbs./10 ft. (0.2 kg/3 m)



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