

# Metallurgical Grade Coke Backfill

## For Improved Anode Performance

Impressed current cathodic protection is an effective method for defending buried metallic structures against corrosion attack. While some of the anodes used for this type of protection can operate without a backfill, the use of a backfill will greatly enhance performance.

Carbonaceous coke breeze is the material most commonly used for this purpose. This material lowers anode-to-earth resistance, provides a uniform environment for current discharge, and extends the anode's design life. Corrpro impressed current anodes are offered prepackaged in a metallurgical grade coke breeze. The company also supplies this same coke breeze separately for large installation projects. This certified backfill is composed of fine particles ranging in size from 0.02-0.375 inch. It poses a high fixed carbon content, which permits good conductivity and a low backfill consumption rate. Because of its unique composition, the backfill increases the effective dimensional area of the anode and lowers groundbed resistance for significantly improved performance.

Corrpro metallurgical grade coke breeze is designed for trouble-free installation. It is supplied in bulk for large installations, and in 100 lb. bags for smaller projects. Because the backfill compacts to a density of 45 lb./ft.<sup>3</sup>, minimal tamping is required. The backfill also has a low moisture content and pours easily.



## Typical Applications

Corrpro metallurgical grade coke breeze is ideal for use in impressed current anode installations where large quantities of backfill are required. This includes horizontal anode installations, which require a continuous coke column. Because the backfill contains extremely fine carbon particles, which can compact and trap gasses, it is less effective in deep anode installations.

## CHEMICAL COMPOSITION

Element	Content %
Fixed Carbon	85.89
Ash	8-10
Moisture	6-9
Sulfur	0.8
Volatile Matter	0.5



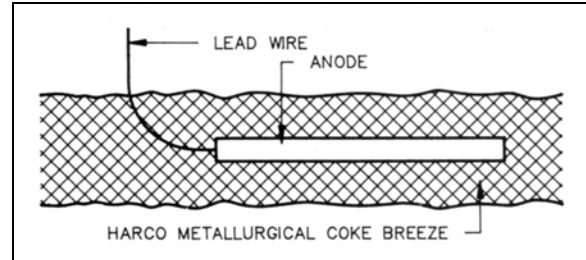
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## Ordering Procedure

Metallurgical coke breeze supplied by Corrpro is offered in bulk or in 100 lb. bags. To order the required quantity for your project, indicate that you need Corrpro metallurgical coke breeze, and specify the packaging method and total pounds required. Calculation of the total pounds necessary can be accomplished using the chart provided. An example is also included to help illustrate this process.



## Standard Dimensions and Shipping Weights

PARTICLE SIZE		BULK DENSITY		SHIPPING WT.	
in.	(mm)	lb./ft. <sup>3</sup>	(kg/m <sup>3</sup> )	lbs.	(kg)
0.02 – 0.375		45		100 (45)	
(0.5 – 9.53)		(722)		bags or bulk	

## Calculation Example

ITEM	EXAMPLE
Backfill Material	<i>Corrpro Certified Metallurgical</i>
Hole Diameter	<i>6 in.</i>
Hole Depth	<i>10 ft.</i>
Number of Holes	<i>10</i>
Total Backfill Wt.	<i>900 lbs.</i>

## Calculation Chart

HOLE DIAMETER		BACKFILL REQUIRED	
in.	(mm)	lbs./ft.	kg/m
6	(152)	9	(13.4)
8	(203)	16	(23.9)
9	(229)	20	(29.8)
10	(254)	25	(37.3)
12	(305)	35	(52.2)
14	(356)	48	(71.6)
16	(406)	63	(94.0)



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