

REFERENCE CELLS

Permacell[®] 804

Permanent Reference Cell

For Buried Structures in High Chloride Areas

Chloride ions affect the stability of copper reference cells. For protected structures located in areas with high chloride ion concentrations, Corrpro offers the Permacell 804 silver/silver chloride reference electrode. This specially designed cell is not susceptible to chloride contamination, and will deliver accurate potential measurements for up to 15 years. It is composed of a silver element, which is immersed in a glass tube containing a supersaturated gel of silver chloride. This entire component is then housed in a durable non-conductive tube, which is further surrounded by a dense mixture of silver and chloride. From this multiple layer construction, cell purity is maintained through the restriction of ions in and out of the cell. Each cell is also tested for electrical potential and resistance prior to shipping. The measurements obtained from these tests are recorded and included with each cell, and cells which do not meet or exceed established performance thresholds are rejected. Completion of these quality procedures provides Corrpro's 804 cell with an accuracy of ± 5 millivolts.

Proper installation of the 804 cell is simple and easy. The cell is pre-packaged in a cloth sack containing a low-resistance backfill, and is ready for immediate installation. Plastic centering rods attached to the cell ensure the backfill is evenly positioned around the cell for a low-resistance groundbed. The cell is also provided with 15 feet of #14 AWG wire containing HMWPE insulation. Once all wire connections have been made and the ground around the cell is moistened, the installation is complete.



Typical Applications

The Permacell 804 permanent reference electrode is designed for use in high-chloride electrolytes. It is ideal for taking potential measurements on pipelines, tanks, and other structures buried in coastal areas. It can also be used to test reinforced concrete structures. With this type of application, the cell is provided without a backfill. Operation of the cell is limited to electrolytes with temperatures between 33° and 140°F. The cell should not be installed in areas with high sulfide or bromide concentrations.



Corrpro Companies Europe Limited

Adam Street, Bowesfield Lane, Stockton on Tees, TS18 3HQ
Telephone: (01642) 614106 (8 lines) Telex: 587388
Fax: (01642) 614100 E-mail: ccel@corrpro.co.uk

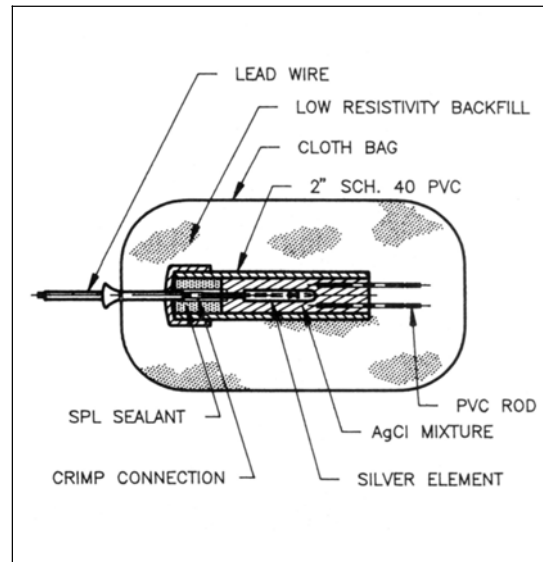
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Ordering Procedure

Corrpro's Permacell 804 is provided standard with backfill and 15 feet of #14 AWG lead wire. To order this cell for your particular application, indicate that you need a Permacell 804 silver/silver chloride permanent reference cell, and specify the quantity desired, whether it is to be used in soil or concrete, and the lead wire length, size, and insulation if different from the standard provided. An example is included to help illustrate this process.

Ordering Procedure Example	
ITEM	EXAMPLE
Quantity	20
Product	<i>Permanent Reference Cell</i>
Permacell Model	804
Application	<i>Soil</i>
Lead Wire: Length (15 ft. = Standard)	<i>15 ft.</i>
Size (#14 AWG = Standard)	<i>#14 AWG</i>
Insulation (HMWPE = Standard)	<i>HMWPE</i>



Product Specifications

	NOMINAL DIMENSIONS		WT.	ELECTRICAL STABILITY	DESIGN LIFE
	Ø	LENGTH			
Bare	1 (25.4)	10 (254.0)	4 (1.82)	±5 millivolts with 8.0 microamp load	15 years
Pkgd.	8 (203.2)	15 (406.4)	23 (10.43)		

