

## Cu/CuSO<sub>4</sub> Reference Electrode



KRE07

### Cu/CuSO<sub>4</sub> Reference Electrode

This high-quality, stable electrode is designed for rugged field and laboratory use. It is most commonly used to provide a standard reference potential for:

- Testing and monitoring cathodic protection (CP) corrosion control systems.
- Measuring the potential of civil structures (like bridges and pipelines) to assess corrosion.

### Technical Specification

<b>Electrode Type</b>	Copper/Copper Sulfate (Cu/CuSO <sub>4</sub> )
<b>Potential</b>	+0.314 V vs. Standard Hydrogen Electrode (SHE)
<b>Body Material</b>	Acrylic Tube
<b>Dimensions</b>	Approximately 80 mm Length x 25 mm Diameter
<b>Internal Components</b>	High-purity Copper Rod
<b>Fill</b>	Shipped dry with solid Copper Sulfate (CuSO <sub>4</sub> ) crystals
<b>Junction</b>	Porous Ceramic Tip

*\*Please refer to the image of electrode dimensions*

## Setup and Activation

### ➤ Activation (Required Before First Use)

This electrode is shipped dry and must be activated before use.

- Locate the small hole on the top cap of the electrode.
- Using a syringe (not included), inject 5 ml of the provided water directly into this hole. This will saturate the internal copper sulfate crystals.

- Wait one hour before use. This allows time for the solution to fully saturate the crystals and the porous ceramic tip, ensuring a stable potential.

### ➤ Usage Instructions

- After the electrode has been activated and has rested for one hour, it is ready for measurement.
- Fix the electrode to your measuring site. Ensure the porous ceramic tip makes good, firm contact with the soil, concrete, or electrolyte you are testing.
- Connect the electrode's wire to the reference (REF) terminal of your high-impedance voltmeter or testing instrument.
- You may now take your potential readings.

## Maintenance and Storage



Cu/ CuSO<sub>4</sub> reference electrode

### ➤ Storage (Very Important)

- When the electrode is not in use, it must be stored in a DRY PLACE.
- Do not store it in water. This electrode is designed to be stored dry.

### ➤ Refilling the Electrode

- This electrode is refillable.
- To refill, carefully open the cap of the acrylic tube.
- Empty any old contents and refill with new, high-quality Cu/CuSO<sub>4</sub> crystals.
- Gently tap the tube to settle the crystals and remove large air gaps.
- Secure the cap and re-activate the electrode as described in Section 3.

### ➤ General Care:

- Handle the ceramic tip with care. It is porous and essential for the electrode's function. Avoid impacts or letting it get clogged.
- The standard life of the electrode is approximately one year, but this can vary greatly depending on the operating environment and frequency of use.

➤ **Warranty & Notes:** This electrode is designed for professional use in corrosion monitoring. Damage caused by improper storage (e.g., storing wet), physical impact (especially to the ceramic tip), or unauthorized modification is not covered under warranty.

## Optional Parts:



**KEC10A**  
Banana Cable Set

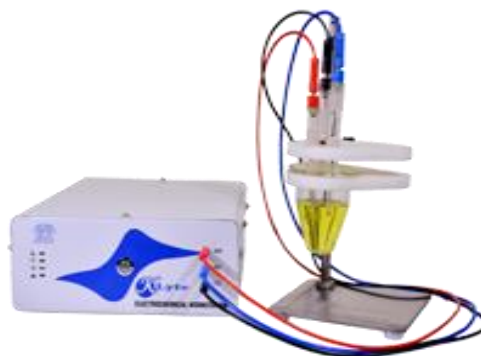


**KEC10B**  
Banana Connector Pin



**KA01 (Red), KA02 (Black)**  
Alligator Clip

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### Product Information Leaflet



**Cu/CuSO<sub>4</sub> Reference Electrode**  
Product ID: KRE07

A complete solution for your  
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