

Sensor Electrical Assembly

Item to be Scouted

60 days

Opportunities will be posted for 30 days unless specified

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

Body of a sensor that will be embedded in cylindrical samples of concrete materials to measure the electrical resistivity of the concrete pore solution. The measurements will be used in concrete mix design and in construction quality control.

2021-120

Supplier Scouting Number (NIST MEP use)

Scouting customer/product [NAICS Code](#), if known

TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought*
		<input type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	b. Reason for scouting submission*
		<input type="checkbox"/> 2 nd Supplier <input type="checkbox"/> Price <input type="checkbox"/> Re-shore <input type="checkbox"/> Past supplier no longer available <input checked="" type="checkbox"/> New Product Startup <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*
		electronic assembly: attach terminals/electrodes to porous sensor body and insulate entire assembly
		b. Provide dimensions / size / tolerances / performance specifications for the item.*
		sensor body: 0.4 x 0.4 x 0.2 inch, terminal size: 0.1 x 0.1 inch, wire length: about 1 foot long
2. Summary of Technical Specifications and Performance Requirements:	c. List required materials needed to make the product, including materials of product components.*	
	terminals and electrodes: copper or stainless steel attachment: conductive glue to secure the terminals to the porous sensor body, and proper connection of wires/electrodes to the terminals insulation: plastic/polymer resistant against high pH levels	

	Requirements cont:	<p>d. Are there applicable certification requirements?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain</p>
		<p>This R&D project will eventually result in certain certification standards, but there are no existing certification requirements.</p>
		<p>e. Are there applicable regulations?* <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Please explain</p>
		<p>meet environmental laws and regulations of federal, state, and local Governments for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.</p>
		<p>f. Are there any other standards, requirements, etc.?* <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Please explain</p>
		<p>To the maximum extent possible, provide or use products that are: energy efficient (ENERGY STAR</p>
		<p>g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain.</p>
		<p>The sensor system will include 1) the sensor body, 2) this electronic assembly (copper or stainless steel wiring/electrodes and terminals insulated with plastic resistant against high pH levels), and 3) a plastic frame, which will have a holding place for the sensor assembly to be securely attached. This manufacturer may opt in to produce one or more of these three components.</p>
BUSINESS INFORMATION:	3. Volume and Pricing	<p>3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:</p>
		<p>Once R&D is completed and test method is standardized, there will be around 10,000 units sold per year.</p>
		<p>b. Estimated target price / unit cost information (flexible and negotiable <u>not</u> accepted) *:</p>
	<p>Estimated unit cost is about \$10 per sensor electronic assembly</p>	
	4. Delivery Requirements:	<p>a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)*</p>
		<p>within the next 6 months, but will need more immediate consultation on plans and protocols.</p>
		<p>b. Describe packaging requirements (i.e., individually/group packaging)*</p>
		<p>group packaging</p>
	<p>c. Where will this item be shipped? *</p>	
	<p>across the United States and Canada</p>	
5. Additional Comments:	<p>Is there other information you would like to include?</p>	
	<p>excitation of the sensor with electrical current and measurement of the resistivity will be conducted using existing instruments that are NOT part of this manufacturing process. Once a non-disclosure agreement is signed, we can provide additional details, plans, protocols, and drawings for the sensor system.</p>	

Photos or diagrams of the item (helpful but not required).