

ITEM OPPORTUNITY SYNOPSIS

Scouting Number: 2023-182
Name of the item to be scouted: Metal Coating Manufacturing Facility
State item to be used in: Arizona

Describe the Item:

Please describe the item application/the end use of the item. Metal coating process for wood flour (sawdust) for synthesis of

Supplier Information:

Type of Supplier Being Sought (select from the list below):

Manufacturer
Contract Manufacturer x
Distributor
Other (Please Specify)

Reason for Scouting Submission (select from the list below)

2nd Supplier x
Price
Re-Shore
Past supplier no longer available
New Product Startup
BABA
Other (Please Specify)

Summary of Technical Specifications and Performance Requirements:

Describe the manufacturing processes (elaborate to provide as much detail as possible)

Manufacturing process requires a two-step process, beginning with activation of wood chips using a cationic monomer then the synthesis of nanocomposites where iron salts are introduced. Activation step is simple and requires the material to be dried after being activated to a certain pH by spray coating with a blend of chemicals to a certain pH (pH can be tested using color test strips). Once spray coated material is dry (can be air dried or oven dried), the material is then introduced with an iron solution and synthesis is completed using ammonium hydroxide and water rinses. Activation step requires pH to be above or at a certain level. For the completion of synthesis step, the water rinses must be clear to ensure all salts have been rinsed off.

Provide dimensions / size / tolerances / performance specifications of the item

List required materials needed to make the product, including materials of product components, if applicable

Materials required to make product include Wood flour (sawdust), Ferric Chloride, Ammonium Hydroxide, Sodium Hydroxide, Quat Structure.

Are there applicable certification requirements?

Yes
No x
Please explain:

Are there any applicable regulations that apply to the production of this item?

Yes x
No
Please explain:

Regulations would be on the disposal of the by product which would also include air quality regulations though local and state requirements.

Are there any other standards / requirements?

Yes x
No
Please explain:

We will require the facility to process small batches at our current facility in Phoenix, AZ as part of our training requirements. If traveling to Phoenix, AZ is an issue we can relocate the training to site of choice.

Additional Comments:

Additional technical comments:

Certain steps during the manufacturing process is crucial for product performance such as the pH during the activation step, these will all be covered in the training once a facility is identified.

Volume and Pricing:

Estimated Potential Business Volume (i.e. #units per day, month, year):	For initial pilot stage we will need between 2500 lbs - 5000 lbs. Once pilot stage completed we will be needing 50,000 lbs - 100,000 lbs annually.
Estimated Target Price/Unit Cost Information:	Estimated target price is unavailable, the final product is a component used for a larger technology.
Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	We will have an on-going need for this product to be manufactured. Can be discussed further and scheduled if needed for minimum amounts to be manufactured by quarterly basis.
Describe packaging requirements (i.e. individually/group packaging, etc.)	Packaged in corrugated or plastic drums with lids.
Where will this item be shipped?	Phoenix, Arizona
Additional Comments:	
Is there other information you would like to include?	Possible opportunity to subsidize equipment to produce this product if needed.