

REQUEST # 50411-1

Polymer Coatings from Renewable Resources

RESPONSE DUE DATE: **April 30, 2007**

POINT OF CONTACT:

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Program Management Office: 216-295-4803

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Opportunity

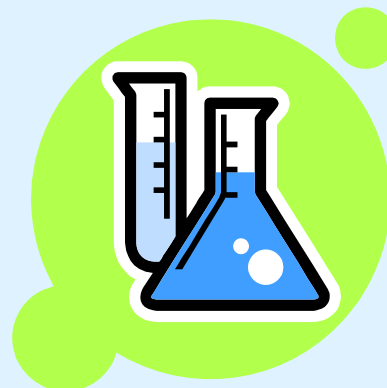
Licensing, contract research, proof of concept leading to scale-up to manufacturing, joint development, supplier agreement for up to **100 tons /year**

Timeline

Adoption of any existing product will be as rapid as product formulation can allow and supply guarantees can be made; Up to 1 year R&D engagements leading to proof of concept

Financials

Significant R&D funding may be available to develop materials showing good promise
Supplier agreement terms to be negotiated



REQUEST FOR PROPOSAL DESCRIPTION

NineSigma, representing a **Global 500 company** is seeking proposals for a **film-forming polymer derived from renewable resources**.

The successful polymer should:

- Be made directly from OR with reactants whose origins are entirely from renewable vegetable resources
- Cure or dry to form 100 micron films below 60°C
- Provide a 100 micron film that is touch-dry within 15 minutes with no intrinsic superficial tack
- Be water resistant after being dry for 10 minutes: ie not resolubilize or leave spotting/streaking marks when subjected to a “water spot test” (100 micron dry film)
- Be soluble or dispersible in water or solvents compliant with the material exclusion list (*vide infra*)
- Be reasonably resistant to cracking and peeling
- Adhere well to ordinary substrates e.g. polyamide 6, glass or paper

Material exclusion list:

To be considered, any offered ingredients, reactants, solvents, catalysts or generated by-products should not, according to the [Dangerous Preparations Directive \(1999/45/EC\)](#), be classified as:

- R50/53 – Very toxic to aquatic organisms or cause long-term adverse effects in aquatic environments
- R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R50 - Toxic to aquatic organisms
- R53 - May cause long-term adverse effects in the aquatic environment.
- R42 - May cause sensitization by inhalation
- R43 - May cause sensitization by skin contact

Ingredients must also not be classified as a carcinogen, mutagen, repro-toxic, or sensitizer.

POSSIBLE APPROACHES

Polymers may be crosslinked if necessary to achieve desired performance

APPROACHES NOT OF INTEREST

Approaches requiring solvents such as white spirits, butyl acetate, toluol, xylene or any component violating the exclusion list above not acceptable.

ANTICIPATED PROJECT PHASES OR PROJECT PLAN

After review of the submitted solution proposals, promising approaches will move to:

Phase I – proof of concept

A sample of the proposed coating material will be tested and accompanying safety and bioaccumulation profiles evaluated. Additional product development may be supported for promising technologies not yet ready for commercialization.

Phase II – commercial development

The client will formulate the product to specific needs with concomitant execution of an acceptable supplier agreement.

APPROPRIATE RESPONSES TO THIS REQUEST

NineSigma's client is open to work with any entity able to offer a viable solution to this important need. Appropriate responses to this RFP may include, but are not limited to:

I am a **company** or **academic researcher** that has developed polymers or monomers from renewable resources that meet the RFP requirements.

I am a **coatings expert** that has identified a polymer material (or its monomer components) that can be obtained from renewable resources and may suit the RFP requirements but need support to develop the technology.

I am a **company** or **academic researcher** that develops or manufactures new materials from renewable resources and may have a viable option for this RFP.

I am a **polymer chemist** that knows of or has developed a polymer derived from renewable vegetable resources that should meet the needs

of the RFP but require financial support to develop the technology.

RESPONDING TO THIS REQUEST

NON-CONFIDENTIAL DISCLOSURE

By submitting a Response you represent that the Response does not and will not be deemed to contain any confidential information of any kind whatsoever.

Your Response is limited to no more than 3 pages. The Response should briefly describe the technical approach; provide information on technology performance, background, and description of the responding team and their related experience.

By submitting a Response, you acknowledge that NineSigma's client reserves the sole and absolute right and discretion to select for award, all, some, or none of the Responses received in for this announcement. NineSigma's client may also only choose to select specific tasks within a proposal for award. NineSigma's client has the sole and absolute discretion to determine all award amounts.

RESPONSE EVALUATION

The **Response** will be evaluated using the following criteria:

- Overall scientific and technical merit of the proposed approach
- Approach to proof of concept or performance
- Potential for proprietary position (i.e., is the technology novel or protectable)
- Economic potential of concept
- Offeror's capabilities and related experience
- Realism of the proposed plan and cost estimates

The offerors with highly responsive proposals will be contacted for next steps.