

Request for Proposal RFP_2018_3899: Self-Stratification Liquid Formulations

RFP Title	Self-Stratification Liquid Formulations
Due Date	02/15/2019
Opportunity	Licensing, product acquisition, contract research, proof of concept leading to scale-up to manufacturing, joint development, supplier agreement. The RFP sponsor is NOT interested in consulting arrangements at this time.
Timeline	Phase 1 – Proof of concept in 6-12 months Phase 2 – Material available for live field testing in 6-12 months
Financials	The Request sponsor has a market for millions of gallons of architectural coatings per year.
RFP Description	NineSigma, representing a Global Consumer Coatings Company , invites proposals for materials and approaches that result in self-stratifying layers within a water-based liquid coating formulation. The client is interested in any approach that results in self-stratification of components, regardless of technical maturity. The proposed mechanism must ultimately be applicable to architectural coatings.
Background	<p>Consumer coatings products are designed to provide a variety of functional benefits, including aesthetic, protective, anticorrosion, etc. Often, multiple coats of the coating product are required to derive the intended benefit or functionality of the applied coating.</p> <p>Coatings companies, including the RFP sponsor, are seeking technologies that would allow for a multifunctional architectural coating product that can be applied in fewer steps (preferably in one single coating step). It is advantageous for the coatings industry to find an approach that can stratify toward and away from a substrate in a predictable manner, so as to optimize functional coatings components in a formulation.</p>
Key Success Criteria	<p>In a fully realized solution, the technology must:</p> <ul style="list-style-type: none">• Provide an effective, durable coating over substrates such as painted, stained, or uncoated surfaces including drywall, wood, and concrete.• Be applicable to a water-based solution, applied and cured at ambient temperatures and without requiring any additional curing steps (such as UV light, applied heat, etc.)• Allow for self-stratification of components within the matrix of the material itself, and only when applied to a coated surface. In other words, a solution must ultimately be shelf stable and the stratification mechanism inactive while in a storage situation.• Activate under ambient and atmospheric conditions; require no external activation mechanism.• Operate on vertical as well as horizontal surfaces.• Meet environmental health and safety requirements in the finished coating product (low VOC, non-toxic, etc.)• Be able to confirm self-stratification by some analytical mechanism.
Area of Interest	Chemistry-Organic > Polymer Chemistry Chemistry Materials Science Chemistry-Physical > Surface Chemistry Materials Science > Smart Materials Engineering Science and Materials

Materials Science > Coatings

Possible Approaches

Possible approaches might include, but are not limited to:

- Solutions from industries such as automotive or aerospace that employ self-stratification materials or technologies
- Insights from industry applications that are trying to prevent stratification of materials or those where self-stratification of components is unintentional
- Polymer science research and innovations
- Mechanisms that employ surface energy, evaporation rate, particle size difference, or solvent polarity parameters to produce a component stratification mechanism

Approaches not of Interest

The following approaches are not of interest:

- Stratification mechanisms that rely only upon density of components (because this approach is not effective on vertical surfaces)
- Materials that do not meet a toxicity profile compatible with a consumer product (e.g. products that contain unreacted isocyanate)
- Stratification or separation mechanisms that require an external stimulus and, therefore, would not be compatible with a consumer coating product

Preferred Collaboration Types

Contract Analysis and Testing
Contract Research
Joint Development
Technology Licensing
Supply Agreement
Technology Acquisition
Research Collaboration
To Be Negotiated

Items to be Submitted

Your response should address the following:

- Non-confidential description of proposed technology and working principle
- Availability of technical data
- Technical maturity of the approach (concept, reduced to practice, prototype, ready to commercialize, ready to implement, commercialized)
- Pathway to commercial scale including timing, estimated budget, and capacity for manufacture
- Position on intellectual property including patent references
- Desired relationship with sponsor
- Team description and related experience

Award Amount

Attachments

No Files Selected

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Picture

