

# Senior Polymer Scientist

Voxel8 is pioneering the field of multi-material additive manufacturing. In the past, additive manufacturing has been limited by the types of materials that can be used to create objects, and most platforms have focused on the printing of single material parts for prototyping. Voxel8's ActiveLab® system enables the fabrication of functional parts using engineering grade reactive elastomers with zonally tunable material properties and high resolution color images. This cutting edge technology is currently being applied to fabricate functional athletic shoe uppers and apparels.

We are looking for passionate, truth-seeking individuals who are audacious in their vision of what can be accomplished by technology start-ups. We are driven by the desire to have an impact, and value the ability to "get it done" with a sense of urgency.

Job Title: Senior Polymer Scientist

**Location:** Somerville, MA

# Job Duties and Responsibilities:

- Lead material development projects(s) focused on developing and manufacturing new polyurethane formulations for digital printing of footwear, apparel and other target applications.
- Develop a suite of polyurethane formulations with varying mechanical properties as well as ability to tune and optimize cure kinetics and adhesive properties for different applications. Emphasis on polyurethane formulations for spray deposition.
- Get your hands dirty (making and testing new material formulations), while also guiding or supervising junior engineers and formulators.
- Collaborate in scale-up and production efforts with Voxel8 partners.
- Help position Voxel8 material offerings to be economically viable while meeting or exceeding performance targets set for properties, reliability, and shelf life.
- Interface with mechanical design team and provide inputs on developing new print heads for polyurethane deposition.
- Provide timely updates to management, assess technical risks and challenges and propose strategies to address these to help manage customer and partner relationships.
- Optimize additive and filler package to meet application specific needs with an eye towards smooth transition to scale-up.
- Develop in-house capabilities to quickly trouble-shoot issues that are commonly observed with polyurethane chemistry.
- Explore new ideas and patent novel approaches that help strengthen the company's IP.

### Required skills:

- An experienced engineer/formulation chemist with at least an M.S. (preferably PhD) in materials science, chemistry or fields related to polymer.
- Has extensive (10+ years) experience in formulating commercialized polyurethane formulations (elastomers, sprays, foams and adhesives) in the past. Experience in 2-part, 1-part, UV-cure, blocked isocyanate, and silane technology is desirable.



- Strong understanding of analytical tools (e.g. DMA, IR, rheology) commonly used in analyzing polyurethane chemistry.
- Capable of independently managing your own project as well as work on team projects.
- Extensive experience with tuning end properties and cure kinetics of polymer formulations.
- Experience with scale-up, shelf life testing, and quality control.
- In depth understanding of surface interactions and interfacial chemistry to trouble shoot problems with inter-material compatibility.

#### Preferred skills:

- Understanding of and experience with silicone chemistry.
- Knowledge of rheological characterization and how to tune rheological properties such as viscosity, yield stress, and recovery time.
- As a senior member of the company, help understand and educate Voxel8 employees and its customers on workplace safety when it comes to handling polyurethane chemistry.
- Strong collaborations skills the ability to work in a close-knit dynamic organization and experience working in an external partnership environment.
- Comfortable wearing many hats
- Able to contribute to a positive innovative company culture
- Has supervised 1-3 employees on projects.

## How to apply?

- 1. Draft a cover letter that talks about why you want to work for Voxel8.
- 2. Submit cover letter and resume to Avin Dhoble- materials@voxel8.com