

JOB DESCRIPTION

Technical Head - Vegan Leather & Biomaterials R&D

Company	Avinya Leather Private Limited
Department	R&D / Material Innovation / Technical Development
Location	Ahmedabad, Gujarat, India
Employment Type	Full-Time
Experience	Minimum 5 years; ideally 5-10 years
Reporting To	Founder / Director
Role Level	Technical Head

About Avinya Leather

Avinya Leather Private Limited is an Indian sustainable-materials company developing plant-based vegan leather from agricultural waste. The company is focused on developing high-performance, scalable and more sustainable alternatives to conventional animal leather and petroleum-intensive synthetic leather for applications including fashion accessories, footwear, upholstery and automotive interiors.

Role Purpose

Avinya is looking for a hands-on Technical Head who can lead material R&D, formulation development, process innovation and technical scale-up of plant-based leather. The role is intended for a scientist who can work across the laboratory and plant environment, from raw material and cellulose/fiber development through formulation, sheet formation, coating, lamination, finishing, testing, pilot production and commercialization.

Key Responsibilities

1. Material R&D & Innovation

- Develop and optimize plant-based leather formulations and material architectures.
- Research and evaluate bio-based polymers, binders, resins, plasticizers, crosslinkers, coatings, adhesives, pigments and functional additives.
- Improve softness, flexibility, tensile strength, tear strength, abrasion resistance, durability, water resistance, heat resistance and surface performance.
- Develop new thicknesses, textures, finishes, colors and material grades for different customer applications.
- Investigate new plant-based and bio-derived feedstocks and material systems.

2. Agricultural Waste & Cellulose-Based Materials

- Develop and optimize methods for converting agricultural residues into useful material inputs.
- Work on cellulose/fiber extraction, purification, treatment and functionalization.
- Study the effect of raw-material composition and processing conditions on final material performance.
- Improve yield, consistency, repeatability and scalability of agricultural-waste-derived raw materials.
- Evaluate alternative agricultural residues and bio-based feedstocks for future product development.

3. Formulation & Process Development

- Design experiments and formulation trials to identify optimum material compositions.
- Develop reproducible laboratory protocols and translate them into pilot-scale processes.
- Optimize mixing, dispersion, coating, lamination, drying, curing and finishing parameters.
- Investigate and eliminate defects such as cracking, delamination, uneven thickness, poor adhesion, surface defects and batch variation.
- Reduce material and process costs while maintaining target performance.

4. Testing & Material Characterization

- Design material testing plans and establish technical specifications for new products.
- Analyze tensile strength, elongation, tear strength, abrasion, flex resistance, adhesion/peel strength, thickness, density, water absorption/resistance and ageing performance.
- Interpret analytical and characterization data from techniques such as FTIR, SEM, TGA, DSC, XRD, contact-angle and related methods.
- Coordinate testing with accredited external laboratories, universities and research institutions.
- Use test results to guide formulation and process improvements.

5. Pilot Plant & Technical Operations

- Lead laboratory-to-pilot and pilot-to-production scale-up activities.
- Develop process parameters, SOPs, batch specifications and quality-control checkpoints.
- Conduct pilot trials and support commercial production.
- Troubleshoot technical issues on the plant floor and implement corrective actions.
- Train operators and junior technical staff on processes, safety, quality and troubleshooting.
- Work with machinery and equipment suppliers on process optimization and technical modifications.

6. Customer & Product Development

- Convert customer and brand requirements into measurable material specifications.
- Develop prototypes and samples for footwear, bags, wallets, fashion accessories, upholstery, automotive and other applications.
- Support customer technical trials, testing, qualification and approval processes.
- Investigate customer feedback and translate it into R&D improvements.

7. Research, IP & External Collaboration

- Track emerging technologies in vegan leather, biomaterials, bio-based polymers, cellulose and sustainable materials.
- Build technical collaborations with universities, research laboratories, testing agencies and industry partners.
- Support patents, technical reports, research publications and intellectual-property development.
- Maintain complete records of experiments, formulations, test results, process parameters and R&D learnings.

Required Qualifications

- M.Tech / M.E. / M.Sc. / Ph.D. in Leather Technology, Polymer Science, Materials Science, Chemical Engineering, Textile Technology, Chemistry, Biomaterials, Biopolymer/Bio-based Materials or a closely related field.
- Minimum 5 years of relevant professional or industrial R&D experience.
- Strong practical understanding of material development, formulation and process optimization.
- Ability to independently design experiments, analyze failures and convert findings into process or formulation improvements.
- Strong technical documentation, analytical and problem-solving skills.

Preferred Experience

- Direct experience in vegan leather, plant-based leather or leather alternatives.
- Leather technology, synthetic leather, polymeric coatings, textile coating/lamination or specialty materials experience.
- Cellulose extraction, natural fibers, agricultural-waste valorization, bio-polymers or bio-composites.
- Hands-on pilot-scale or industrial scale-up experience.
- Experience taking a material from laboratory formulation to prototype, pilot production and commercial manufacturing.
- Experience working with brands, industrial customers, research institutes or external testing laboratories.
- Patents, publications or demonstrated product-development achievements.

Core Technical Competencies

- Leather / synthetic leather / vegan leather technology
- Polymer and bio-polymer science
- Material formulation and compounding
- Cellulose and natural-fiber processing
- Coating, lamination and surface finishing
- Adhesives, binders, resins and additives
- Material testing and characterization
- Pilot-plant process development
- Root-cause analysis and process troubleshooting
- Quality control and technical specifications

Key Performance Expectations - First 6-12 Months

- Establish a structured R&D workflow, experimental documentation system and material-development roadmap.
- Improve the consistency and performance of Avinya's existing material formulations.
- Develop and validate new formulations and material variants for target applications.
- Establish repeatable laboratory-to-pilot processes and key process parameters.
- Create technical specifications, SOPs and QC parameters for critical raw materials and finished materials.
- Lead successful pilot trials and resolve major technical/manufacturing bottlenecks.
- Build a testing and characterization framework for continuous product improvement.
- Identify new technologies, raw materials and collaborations that can strengthen Avinya's product pipeline.

Ideal Candidate Profile

The ideal candidate is a hands-on scientist and problem solver, not only a laboratory researcher. They should be comfortable moving between laboratory experiments, material testing, technical documentation and plant-floor troubleshooting. Candidates who have successfully taken a material from laboratory R&D to pilot or commercial scale will be strongly preferred.

Important Hiring Note

Direct vegan-leather experience is highly preferred but should not be mandatory. Strong candidates from leather technology, polymer science, biomaterials, bio-based composites, textile coatings, cellulose-based materials or related industrial R&D fields should also be considered.

Suggested Screening Questions

- Describe a material you developed from laboratory stage to pilot or commercial scale.
- What formulation variables would you investigate if a vegan-leather sheet is too brittle?
- How would you improve flexibility without sacrificing tensile and abrasion performance?
- What experience do you have with cellulose, natural fibers or agricultural waste?
- Which analytical techniques have you personally used, and how did you use the results to improve a material?
- Describe a production defect you solved and the root-cause process you followed.
- What experience do you have with coating, lamination, binders, resins or adhesives?
- Have you managed or supervised a pilot plant, laboratory or technical team?
- What would be your approach to taking a new plant-based material from lab formulation to industrial production?

Compensation

Compensation: Competitive and commensurate with experience, technical capability and demonstrated industrial R&D / scale-up expertise. Final compensation may be structured based on the candidate's experience and role responsibilities.

Application

Contact for Applications / Enquiries:

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Interested candidates should submit a detailed CV highlighting relevant R&D projects, material development work, patents/publications, pilot-scale or industrial scale-up experience, and specific technologies or materials handled.

Apply Here:

<https://forms.gle/6XaMZHHMmmzwvvtor8>