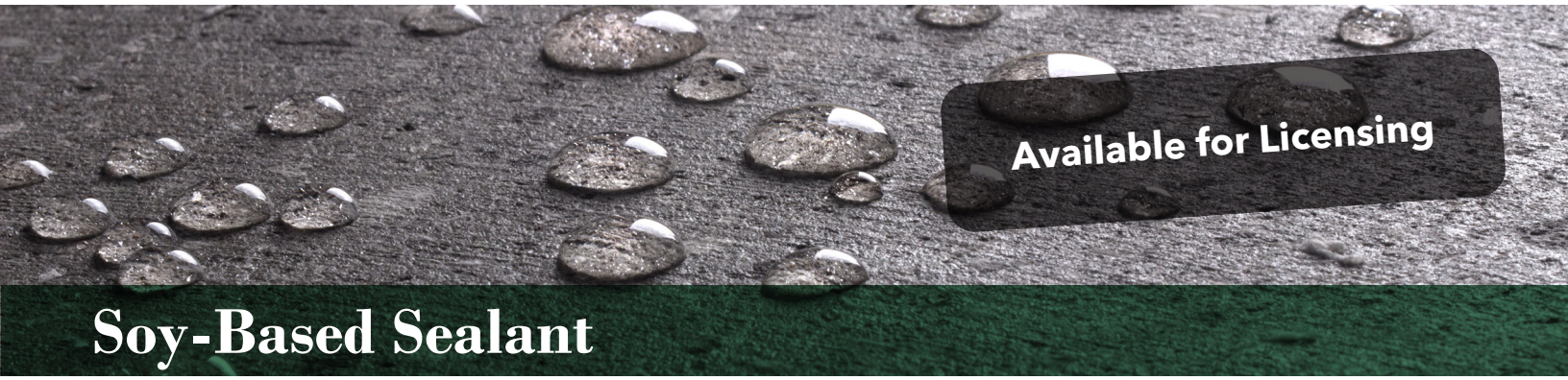
Airable
RESEARCH LAB
WHERE SUSTAINABLE SOLUTIONS START



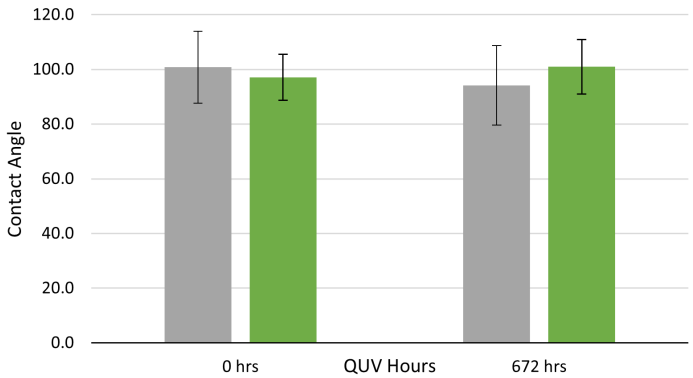
Soy-Based Sealant

Airable Research Lab has demonstrated proof-of-principle results with the development of a soy-based concrete sealant that acts as a water repellent when applied to porous surfaces like brick. In lab testing, Airable's sealant demonstrated excellent hydrophobicity, good water repellency, and efflorescence prevention. The Airable formulation contains 20% soy-derived bio-content, addressing market demand for sealers from sustainable sources.

THE TECHNOLOGY

After prolonged exposure to the weather, concrete surfaces become damaged and discolored. Airable's formulation increases the contact angle between water and the surface, providing hydrophobic properties. Applying the sealant prevents water damage to the surface, extending its life while maintaining its appearance.

To determine the product's efficacy, Airable researchers treated two identical sets of bricks: one with Airable's formulation and one with a commercial product. The bricks were then exposed to QUV accelerated weathering for 672 hours (equivalent to approximately two years of natural weathering). The research team dropped water on the bricks and measured the water-to-brick contact angles. Results showed no significant differences between the petroleum-derived commercial sealant (gray) and Airable's bio-based sealant (green) with respect to water-repellent properties.



Water-to-brick contact angles on surfaces treated with a commercial product (gray) and the Airable product (green). The bricks have similar hydrophobic properties.

THE BENEFITS

- Biobased
- Colorless
- Effective
- Easy to formulate
- Easy to apply (sprayable)
- Quick-drying
- Highly vapor permeable

THE TECHNICAL DATA

Property	Value
Active	25%
Physical form at 20°C	Liquid
Density	0.7959 g/ml
Viscosity at 20°C	10.00 cPs
Refractive index at 20°C	1.428
Moisture vapor permeability	>90%
Solubility in water	Soluble
Contact angle on brick	97.2
Reduction in water penetration (ASTM E514)	65%
Efflorescence (ASTM C61)	0 out of 10 samples

Bricks treated with Airable's formulation after exposure to accelerated weathering. The large, raised beads of water indicate a decrease in water surface tension.

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