



Soy-Based Structural Adhesive

Airable Research Lab has developed a structural adhesive with high bio-based content, addressing the market demand for adhesives from sustainable sources. Researchers have demonstrated proof-of-principle with this two-part epoxy acrylate. In preliminary lap shear testing, the Airable adhesive performs well with room for tunability. The compound gels in two hours and fully hardens over the course of a few days. Heat may be applied to accelerate the cure time. The formula is BPA-free—a win for sustainability, personal health, and the environment.

THE TECHNOLOGY

Airable's structural adhesive takes advantage of common chemistries, reactions of epoxides and acrylates. The formulation contains 59% soy content.

TECHNICAL RESULTS

PROPERTY	VALUE
Density	1.0248 g/mL
Viscosity at 20°C	53,500 cPs
Force at peak stress	117 lbf
Max elongation	0.027"
Pot life	30 minutes
Shelf life	> 2 months (ongoing)
Gel time at 20°C	2 hours

STATUS AND AVAILABILITY

The first round of testing has shown promising results. The formulation can be optimized and tailored to an individual company's needs. Contact Airable Research Lab to discuss partnership options.

