



# Soy Epoxy Hardener

Airable Research Lab has developed a soy-based hardener for use in epoxy resins. Hardeners are commonly used to crosslink and cure epoxides in adhesives and thermoset materials. This curing agent has 50% biobased content, providing a greener alternative for adhesive formulators.

## THE TECHNOLOGY

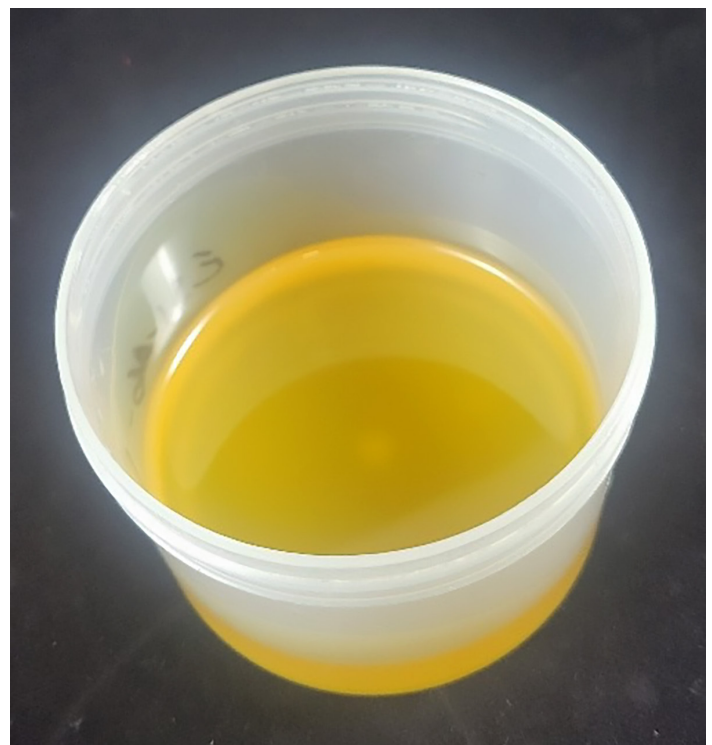
The soy-based hardener uses common amine functionalities to achieve a strong crosslink between epoxy groups. The material may also be used to crosslink acrylates, vinyls, and acetoacetates through Michael addition and enamine reactions.

The table below provides two examples of resins formulated with the Airable hardener: a resin derived from epoxidized soybean oil and one using BPA as a feedstock.

EPOXY	HARDENER WEIGHT RATIO	CURE TIME AT 150°C	CURE TIME AT 21°C
Epoxidized soybean oil	1.05	16 hours	> 7 days
BPA (MW = 355)	1.38	1 hour	16 hours

## PROPERTIES

- Amine value = 236 KOH/g
- Viscosity = 7610 cPs
- Refractive index = 1.4850
- Density = 1.023 g/mL



## STATUS AND AVAILABILITY

This technology is in development and may be optimized and tailored to your company's needs. Contact Airable Research Lab to discuss partnership options.