

## Specialty Epoxy Resins Resin Research Epoxy Resins

Clean, Green and Safe



Resin Research has a deep commitment to making its products cleaner, greener and safer. From the obvious solvent free products through its non-carcinogenic chemical structures, lower sensitising resins, and its deep green credentials, this is a company that reflects fully the ethos of Seabase Resins & Coatings. A better product made safer and greener. Result.

### Green Innovation and Resin Research Epoxies

Resin Research's leadership in sustainable technologies goes back over three decades to a time when few manufacturers used high solids resin systems, when no one concerned themselves with production waste and when VOC's were part of everyday. In fact very few in industry back then had even heard of a high solids resin or a VOC.

Through the years we have been the spearhead for many of the technologies that today's industry takes for granted. Cycloaliphatic epoxy hardeners, UV stability, multi modulus resin systems, elimination of VOC's, effective recycling in production, waste reduction, product durability, etc. Our efforts have included numerous educational seminars, magazine articles, online educational help and a video series.

It's with this in mind that we proudly introduce our latest breakthrough in 21st century technology, Sustainable epoxy resin with **effective high bio** content. Regardless of which resin you choose from our broad line of systems all resins sold by Resin Research effective November 1, 2013, will have a **high bio content of between 38 to 48%**. Unprecedented? Yes.

In the past few years there have been companies entering the epoxy market with claims of bio content. These new systems generally contained modest bio content based on epoxidized oils. This technology left much to be desired as epoxidized oils degrade the product's physical properties and these products are typified by higher toxicity curing agents, lower strength characteristics and very low Tg (heat stability).

Unlike epoxidized oils, which are used in place of normal epoxides, our new technology is based on a complete remake of the epoxy building blocks themselves. This remake takes these basic building blocks and uses a newly discovered bio waste stream to build the exact same epoxide that is built usually from pumped chemicals. In this way the epoxy remains undiluted and has the exact same strength and reactivity in a product that has even higher bio content than the epoxidized oil based resins.

Good news for those who want to make a quality green product that has no downside.  
**Greater strength, better worker safety, better durability, more sustainability.**

## Building Green

At Resin Research, “sustainability” was integrated into our business model from the start. This business model creates long-term business value through a responsible long term view of environment, products, and social and ethical responsibility.

## Green Chemistry

Resin Research is dedicated to the principles of green chemistry. Sustainable or green chemistry is the practice of producing chemical products in a manner that is environmentally suitable, safe, with fewer human and environmental consequences. When assessing environmental impact, Resin Research considers each product’s critical life cycle components, including design, manufacture, transportation and use. Our chemical staff is devoted to new ways to decrease consumption of materials and energy while reducing waste both in our own production as well as in our business partners production facilities.

## Excellence in safety, health, and environmental protection

Resin Research’s 30+ years of committed and engaged environmental leadership strives to maintain and operate efficiently to create a safe and sustainable environment for ourselves, our customers, their employees and our global communities.

## Sustainable Chemistry

To meet sustainable chemistry standards, Resin Research evaluates potential new products for sustainability. To meet our sustainability criteria, new products should strive to generate savings in energy, reduce greenhouse emissions, reduce waste during production or customer use, contain effective renewable material, improve recyclability and present less risk for environment and worker.

## Production of sustainable products

Resin Research has made a long term commitment to creating technologies which help product durability by lengthening product lifespan thereby reducing the carbon footprint of finished product when using Resin Research Epoxies. This allows customers to produce better performing end products with less environmental impact. Our line of specialty resins enables easy production of a myriad of high performance composite products with almost unlimited choice in production technique.

## Business responsibility

At Resin Research, we have a longstanding history of business leadership in promoting ecological awareness. We believe in business responsibility when it comes to industry’s interdependence with the world around us. We do our best to share with our business partners ways to improve production management, reduce waste, improve product durability, eliminate solvent waste bi-products and improve worker safety. This has been a cornerstone of our business for over 25 years.

## Vendor responsibility

Because every link in the supply chain is important, Resin Research seeks out sustainability-oriented vendors for its raw materials and works to reduce environmental impacts such as packaging and shipping. Moreover, consistent with our company’s mandate, we continually implement processes to ensure that all suppliers and third parties we work with are managing materials responsibly.

## Product lifecycle - Defining responsibility from beginning to end

Research and development is the primary aspect of our sustainability effort. Innovation at Resin Research improves products and processes that are environmentally suitable and perform better. It is a way of thinking and acting responsibly that has been part of our business since it's inception.

With this in mind, we conceptualize the total lifecycle impact of our products and technologies by supporting scientific research and product safety standards. We help to educate every part of the supply chain—from our suppliers to end users about the safe and proper use and disposal of our products.

We are invested in the industries we serve. For more than 30 years we have participated in scientific research to improve health and environmental safety. We are a leader in the development of industry standards and test methodologies. We are an active participant in on line instructional forums and we also initiate hands-on educational efforts with our customers and communities

**Resin Research. We really want safer, greener materials.**