

---

## Novomer completes first large-scale PPC polyol manufacturing run

Novomer Inc. has announced the world's first large-scale manufacturing run of polypropylene carbonate (PPC) polyol, producing over 7 t of finished product.

The PPC polyol was scaled up and produced with **Albemarle** at its Orangeburg, SC, USA, manufacturing facility using the company's existing equipment which was modified for PPC polyol production. This work was completed in conjunction with **Novomer's** three-year, USD 25 million US Department of Energy (DOE) award.

According to Novomer, the recently produced material, a 1,000 molecular weight PPC diol, will be used to accelerate product qualification and adoption in a wide range of conventional polyurethane applications including flexible and rigid foams, adhesives and sealants, coatings, and elastomers. Novomer is currently working closely with several major companies in various segments of the polyurethanes industry and this material will enable commercial scale testing of the polyol.

Novomer polyols are designed to replace conventional petroleum-based polyether, polyester, and polycarbonate polyols. The polyols are based on the co-polymerisation of carbon dioxide (CO<sub>2</sub>) and epoxides and the resulting products contain more than 40 % CO<sub>2</sub> by weight. The use of waste CO<sub>2</sub> as a significant raw material yields a product with a very low carbon footprint. In addition, since waste CO<sub>2</sub> is significantly lower in cost than conventional petroleum-based raw materials, Novomer polyol manufacturing costs will be favourable compared to conventional polyols when produced at full commercial scale.

In terms of performance, Novomer says its PPC polyol has a unique polycarbonate backbone which increases the strength and durability of polyurethane products. Incorporating these new polyols into existing formulations is said to yield foams with higher tensile, tear strength, and load bearing capacity; adhesives and coatings with improved adhesion, cohesive strength, and weatherability; and elastomers with greater tensile and flexural strength.

**Adresse:**  
<http://www.gupta-verlag.com/general/news/technology/12638/novomer-completes-first-large-scale-ppc-polyol-manufacturing-run>