



## **NIOST: NEW ACHIEVEMENTS**

SIBUR's R&D Centre provides Russian manufacturers with innovative solutions that help take the product quality to a new level.

NIOST is currently working on several dozen projects, including the development of new products and processes associated with organic synthesis, catalysts, and polymers.

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### **THE ADVENT OF RUSSIAN-MADE 2-EHA HAD A SIGNIFICANT EFFECT ON THE RUSSIAN MARKET.**

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Using proprietary technologies in production, such as that developed by NIOST for producing the 2-EHA complex ester, gives the company a competitive edge on both the domestic and international markets. SIBUR's facility in Dzerzhinsk started commercial production of 2-EHA in October 2016, and the product has already found its buyer in Russia and abroad.

2-Ethylhexyl acrylate is used to improve the waterproof, adhesive and sun resistance properties of paints. It is a component of premium paints and varnishes. The product is also used for instant pressure-sensitive compound adhesives, various plastics and latexes.



*SIBUR-Neftekhim's site that has been producing 2-EHA since 2016.*

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SIBUR HAS BECOME THE FIFTH COMPANY IN THE WORLD TO SET UP A FULL 2-EHA PRODUCTION CYCLE USING ITS OWN FEEDSTOCK.

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SIBUR has become the fifth company in the world to set up a full 2-EHA production cycle using its own feedstock. Before SIBUR, only global giants like BASF, LG Chem, Formosa, and Mitsubishi Chemical had a closed-loop production systems.

One of the feedstock components for 2-EHA is acrylic acid, also produced in Dzerzhinsk. The second feedstock is 2-Ethylhexanol, manufactured by SIBUR-Khimprom's facility in Perm. As the 2-EHA production process is quite similar to that for butyl acrylate, the product is made on the existing butyl acrylate line at SIBUR's Dzerzhinsk site that was upgraded for the purpose. SIBUR integrated new columns, tanks and pumps into the existing butyl acrylate production process, added extra pipes, and regrouped feedstock and product storage tanks.



*NIOST laboratory.*

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THE USE OF PROPRIETARY TECHNOLOGIES GIVES THE COMPANY A COMPETITIVE EDGE IN BOTH DOMESTIC AND INTERNATIONAL MARKETS.

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Until 2016, Russian consumers had to contend with the meagre quantities of imported 2-EHA. However, for two and a half years now SIBUR has been providing a substitution, with production and sales volumes constantly growing. SIBUR-Neftekhim currently produces over 8 ktpa of 2-Ethylhexyl acrylate.

The advent of Russian-made 2-EHA had a significant effect on the Russian market. The areas of acrylate application are growing exponentially. Paint and varnish manufacturers are now working on new formulas to expand their portfolios, and the road industry uses the product as an ingredient in paints and cold plastics for road marking. In addition, SIBUR is actively pursuing expansion into the global market by developing the exports. The domestically-produced 2-EHA has proven to be a worthy competitor to the foreign product, one that is on par in terms of quality.

The use of an internally-developed technology combined with own feedstock make the whole production quite flexible, so no external factors can affect the product quality.