

Bayer MaterialScience plans further investment in CO₂-based polyols

The greenhouse gas carbon dioxide can be used as a basic building block for plastics. Following a successful test phase and promising market analysis, Bayer MaterialScience plans to invest EUR 15 million in the construction of a production line at its Dormagen site, which will use CO₂ to produce a precursor for premium polyurethane foam.

The line will have an annual production capacity of 5,000 t. The permit application will be submitted to the Cologne district authority in the next few weeks. The objective of the “Dream Production” project is to launch the first CO₂-based polyols on the market starting in 2016. Processors of polyols and polyurethanes have already expressed considerable interest.

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The new polyols from **Bayer MaterialScience** have at least the same high level of quality as conventionally manufactured materials and a more sustainable impact. Using a certain amount of CO₂ as a building block enables a reduction in the amount of the petroleum-based raw material, propylene oxide. The CO₂ balance of the new process is far better than that of the conventional production method.

“Improving the sustainability of everything we do is an integral part of our business strategy and this principle is implemented in our Dream Production project. We have succeeded in turning a waste gas that is potentially harmful to the climate into a useful raw material. That helps the environment and mankind, and we all benefit,” said Bayer MaterialScience CEO **Patrick Thomas**.

The technology to produce these polyols has been developed in collaboration with partners in industry and academia. The company discovered the catalyst that brings about the chemical reaction with the required level of efficiency, and developed it together with the **CAT Catalytic Center**, a research facility in Aachen, Germany. The process was tested extensively in a pilot plant at the Leverkusen site as part of the publicly funded Dream Production research project. This was accompanied by a study of market demand.

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