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Dow and Evonik announce startup of hydrogen peroxide to propylene glycol (HPPG) pilot plant

- HYPROSYN® process enables production of propylene glycol without intermediate steps
- Innovative technology offer flexibility, lower costs, and a smaller environmental footprint
- Strategic partners aim to meet growing market demand for propylene glycol sustainably

Horgen, Switzerland, and Hanau, Germany. Dow and Evonik are proud to announce the successful start-up and operation of a pioneering hydrogen peroxide to propylene glycol (HPPG) pilot plant at Evonik's site in Hanau, Germany. Collaboratively developed by Dow, the world's largest producer of propylene glycol, and globally leading hydrogen peroxide manufacturer Evonik, the plant uses the distinct HYPROSYN® method to enable the direct synthesis of propylene glycol (PG) from hydrogen peroxide and propylene.

"At Dow, we believe in collaborating with our customers and other stakeholders to create, innovate and find solutions to big challenges. So, I am delighted to see this plant become operational through this collaboration," said Andrew Jones, global business director for Chlor-Alkali Vinyl & Propylene Oxide, Propylene Glycol, at Dow. "With this innovative technology and flexible asset and business model, we are well positioned to meet our customers' needs and growing market demand."

"At Evonik Active Oxygens, we put sustainability at the core of futurizing our business. This relies not only on innovative technologies, but also the ability to scale these up and bring them to market," remarked Michael Träxler, head of Evonik's Active Oxygens business line. "That's where excellent strategic partnerships come into play. The startup of this pilot plant in Hanau thus not only represents a major technological milestone in our efforts to make industry more sustainable, it is also a prime example of how cross-company collaboration, like this partnership with Dow, is essential to driving sustainable solutions."

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The pilot plant will demonstrate the benefits of the novel technology. In contrast to the traditional process, where propylene is used to make propylene oxide (PO), which is converted to PG through hydrolysis, the HYPROSYN® process uses a novel catalytic system to generate PG directly from propylene and hydrogen peroxide. The integration of all key reaction stages in a single reactor eliminates the need for additional investments in PO capacity and lowers capital requirements. The process also enables a reduced environmental footprint, e.g., water consumption is reduced to less than 5% compared to conventional PG methods. In addition, existing PG plants can be retrofitted to benefit from this new technology.

Propylene glycol serves as an essential ingredient such as a high-performing additive, intermediate, or initiator in a wide range of applications — including industrial, food and animal feed, pharmaceuticals, and cosmetics. Over the next few years, the Dow and Evonik teams will continuously evaluate the plant's operations and capabilities to scale up manufacturing, in support of growing market demand.

For more information please visit: [Dow propylene glycol solutions](https://www.dow.com/propylene-glycol-solutions) and [evonik.click/hyprosxn](https://www.evonik.com/click/hyprosxn)

About Evonik

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €18.5 billion and an operating profit (adjusted EBITDA) of €2.49 billion in 2022. Evonik goes far beyond chemistry to create innovative, profitable, and sustainable solutions for customers. About 34,000 employees work together for a common purpose: We want to improve life today and tomorrow.

About Dow

Dow (NYSE: DOW) combines global breadth; asset integration and scale; focused innovation and materials science expertise; leading business positions; and environmental, social and governance leadership to achieve profitable growth and help deliver a sustainable future. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company in the world. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications. Dow operates manufacturing sites in 31 countries and employs approximately 37,800 people. Dow delivered sales of approximately \$57 billion in 2022. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter.



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