

## Evonik launches next-generation biofuel component

- Bio-MTBE produced at Marl site since March 2012
- Bio-MTBE makes it easier for fuel producers to comply with EU biofuel directives ("biofuel quotas")
- CO<sub>2</sub> emissions from combustion of gasoline reduced
- Does not compete with food production
- Implementation of EU Renewable Energy Directive 2009/28/EU (RED) in all EU member states is expected to provide opportunities for growth

With a biological version of a premium antiknock agent in its portfolio (methyl *tert*-butyl ether, or MTBE), Evonik now offers oil companies a new option for significantly increasing the biocontent of their fuels and reducing their carbon footprint. "Bio–MTBE is the only commercially available, next–generation biofuel component for gasoline in Germany," explains Dr. Rainer Fretzen, who heads the Performance Intermediates Business Line at Evonik. "And it doesn't compete with food production, either." Bio–MTBE is produced in Marl (Germany) along with conventional MTBE.

Evonik produces Bio–MTBE from isobutene and biomethanol. Because it is made from raw glycerine, which is itself a co–product of the biodiesel manufacturing process, biomethanol is classified as a waste product according to the EU Renewable Energy Directive (RED)—doubling its value for determining bioenergy content. That makes Bio–MTBE a promising option for fuel manufacturers looking to meet EU specifications for biofuel use and CO<sub>2</sub> reduction.

MTBE has been a trusted antiknock agent for decades, and Bio-MTBE possesses the same technical advantages as its conventional counterpart: high energy density (86 percent of gasoline), low vapor pressure, low oxygen content, and very low solubility in water. That translates to excellent compatibility with other gasoline components and to its wellknown positive effect on gasoline quality. It also means that Bio-MTBE can be handled safely in refineries and storage tanks and be conveyed by pipeline. October 4, 2012

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While Evonik has primarily sold Bio-MTBE in Germany and the Netherlands, implementation of EU directives in other member states promises additional growth potential for this next-generation biofuel component. If needed, Evonik could shift the full capacity of its plant (550,000 metric tons per year) over to production of Bio-MTBE.

## **Company information**

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Evonik benefits specifically from its innovative prowess and integrated technology platforms.

Evonik is active in over 100 countries around the world. In fiscal 2011 more than 33,000 employees generated sales of around  $\leq$ 14.5 billion and an operating profit (adjusted EBITDA) of about  $\leq$ 2.8 billion.

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