

News Release

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BASF introduces Fourtune[™] Fluidized Catalytic Cracking (FCC) catalyst to deliver more butylene for refiners

- Superior butylene selectivity over propylene for improved alkylate yield
- Increases FCC gasoline octane
- No increase in hydrogen and coke production

BASF announced today the commercial launch of Fourtune[™] which is a new Fluid Catalytic Cracking (FCC) catalyst product for gasoil feedstock. Fourtune is the latest product based on BASF's Multiple Framework Topology (MFT) technology. It has been optimized to deliver superior butylene over propylene selectivity while maintaining catalyst activity and performance.

Fourtune commercial trials have confirmed its ability to deliver better economic performance through butylene selectivity, high conversion, and maintains coke selective bottoms upgrading and high distillate yields that increases refiners' profitability.

BASF's innovative MFT technology enhances performance through the use of more than one framework topology that work together to tailor the catalyst selectivity profile. Successful evaluations of the new MFT technology have demonstrated Fourtune's ability to help maximize margins and provide operating flexibility to make more butylene to feed the alkylation unit. The technology provides an answer to the increased demand for octane since today's tighter sulfur regulations often require post treatment on the gasoline stream, which can negatively impact the octane pool.

Detlef Ruff, Senior Vice President Process Catalysts at BASF, said: "We hear very positive feedback from our customers who are using Fourtune. We are confident that the benefits of this new product will bring our customers improvements in butylene selectivity and the overall potential to make the refineries more profitable."

"The first thing we did on our path to develop Fourtune was to listen to our customers," said Jim Chirumbole, Vice President Refining Catalysts at BASF. "They

told us they needed an innovative, flexible solution to help them make more octane for the marketplace, and we're happy to deliver this new product to the market."

About BASF's Catalysts Division

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success. Further information on BASF's Catalysts division is available on the Internet at <u>www.catalysts.basf.com</u>.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 117,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2019. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at <u>www.basf.com</u>.