

Flex-Tec™

Fluid Catalytic Cracking (FCC) Catalyst for residual feedstock applications

Flex-Tec is a high activity catalyst for reducing mass transfer limitation and metals effects with contaminated feedstocks.

Technology

Based on BASF's commercially proven Distributed Matrix Structures™ (DMS) technology, Flex-Tec provides enhanced diffusion of feed molecules to pre-cracking sites that are located on the external, exposed surface of highly dispersed zeolite crystals. Improved reaction selectivities are enabled by feed pre-cracking on the zeolite, rather than on an active amorphous matrix material.

The optimized porosity of DMS technology allows high bottoms conversion with low coke, providing higher yields of valued gasoline and light olefin products. This is achieved by reducing mass transfer limitations that are present in all FCC operations.

Flex-Tec contains BASF specialty alumina designed to improve the passivation of contaminant metals and achieve state-of-the-art metals tolerance. The specialty alumina minimizes non-selective secondary metals reactions that result in increased coke and gas formation.

Flex-Tec combines the benefits of DMS and metals passivation technologies to deliver coke selective deep bottoms conversion and metals resistance.

Applications

Flex-Tec is designed for excellent activity maintenance, and low contaminant coke and gas in operations that process severe residual feedstocks:

- High conversion from contaminated feedstocks
- Total equilibrium catalyst (Ecat) metals (Ni+V) > 5000 ppm
- Iron contamination
- Improving liquid yields via high coke and gas selectivity

Typical Properties*

Chemical Composition

Al ₂ O ₃ , wt%	37-45
Na ₂ O, wt%	0.25-0.40
Surface Area, m ² /g	250-350

Density

ABD, g/cm ³	0.72-0.86
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Particle Size

APS, μm	75
0-40, %	12

* Properties can be customized to individual refiners' needs. These are the typical ranges that can be achieved.

About Us

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.

BASF - We create chemistry

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