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Product Data Sheet

Endurance®

Fluid Catalytic Cracking (FCC) catalyst for moderate resid applications

Endurance is designed for moderate resid or hydrotreated resid feed applications needing enhanced metals passivation.

Technology

Endurance is based on BASF's Distributed Matrix Structures™ (DMS) technology, which provides enhanced diffusion of feed molecules to pre-cracking sites that are located on the external, exposed surface of highly dispersed zeolite crystals. The feed pre-cracks on the zeolite itself, rather than on an active amorphous matrix material. This provides improved reaction selectivities and minimizes the secondary diffusion reactions to less valuable products.

The optimized porosity of DMS reduces mass transfer limitations in FCC unit operation, leading to more effective zeolite utilization, and less overcracking to coke and gas. This allows high bottoms conversion with low coke, and higher yields of valuable products.

Endurance is also designed to passivate contaminant metals, minimizing non-selective secondary reactions that result in increased coke and dry gas formation.

Applications

Endurance is ideal for operations that process moderate or hydrotreated residual feedstocks with total catalyst metals levels exceeding 2000 ppm (Ni + V).

Endurance provides the following benefits:

- Helps relieve air blower and wet gas limitations to improve unit profitability
- Achieves higher catalyst activity in circulation limited units to improve economic performance
- High liquid yields achieved with coke and gas selectivity improvements

Typical properties*	
Chemical Composition	
Al_2O_3, wt%	37-43
Na_2O, wt%	0.25-0.39
Surface Area, m^2/g	240-350
Density	
ABD, g/cm^3	0.72-0.89
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.

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