

Luminate™

Fluid Catalytic Cracking (FCC) Catalyst for improved delta coke and high liquids yields

Luminate is a flexible FCC catalyst that delivers outstanding coke selectivity for increased yields of valuable liquid products.

Technology

Luminate is the newest innovation in BASF's FCC catalyst portfolio for vacuum gas oil (VGO) or mild resid feedstocks based on advancement of BASF's coke-selective zeolite catalyst technology.

Using the Improved Zeolite-Y (IZY) technology, **Luminate** is engineered to improve coke selectivity and liquid yields. While the performance of FCC catalysts is typically limited by diffusion, the IZY technology optimizes the mesoporosity of the catalyst particle, creating space for hydrocarbons to access active zeolite sites. Other improvements in catalyst design allow higher selectivities and in-unit activity.

With improved diffusion through a more tailored crystalline structure, IZY enhances zeolite selectivity and stability to improve yields and coke selectivity.

Applications

Luminate is engineered to address current market demands, and is applied in the following situations:

- Units that can take advantage of increased conversion for higher gasoline and liquefied petroleum product (LPG) yields.
- Units requiring the highest degree of coke selectivity for optimum operations
- Units operating at or near air blower or regenerator temperature limitations seeking additional means to increase unit profitability

Typical Properties*

Chemical Composition

Al ₂ O ₃ , wt%	36-48
Na ₂ O, wt%	0.21-0.35
Surface Area, m ² /g	230-330

Density

ABD, g cm ⁻³	0.94
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Particle size

APS, μm	77
0-40, %	11

* Catalyst properties can be customized to individual refiners' needs. These are the typical ranges.

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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