BASF
We create chemistry

Performance Profile

Valor®

Advanced Metals Management Technology

Valor technology can be used in combination with entire BASF FCC catalyst portfolio to improve Vanadium tolerance

Vanadium is a known contaminant for FCC catalysts. It can cause zeolite destruction, activity loss, and increases in dry gas and coke. These effects can be managed by effective use of a Vanadium passivator.

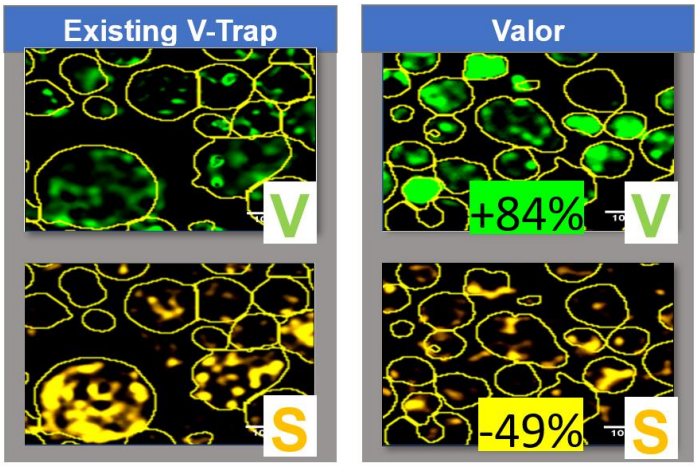
Valor® is a rare-earth based vanadium passivator which utilizes improved sulfur tolerance to effectively immobilize and passivate vanadium contaminants in the FCC unit. This results in superior catalyst activity retention, and a reduction in coke and hydrogen formation. Additionally, the versatility of Valor allows for use at a variety of metal levels and with different BASF catalyst technologies. The result is an industry-leading solution for effective cracking of high-vanadium feedstocks.

Results

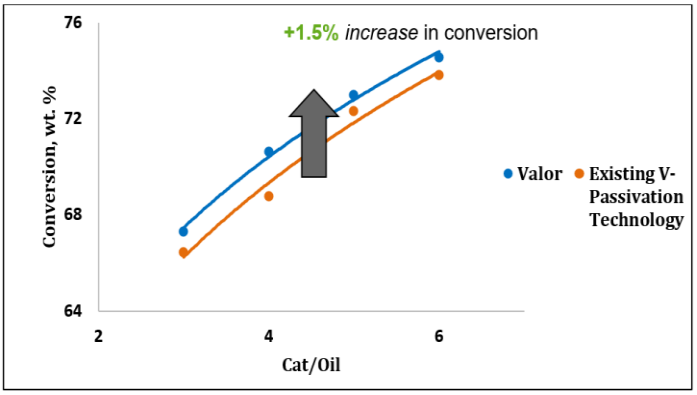
Imaging analysis of catalyst using **Valor®** (right) and a non-REO V-Trap (left) is used to quantify the amount of Sulfur (yellow) and Vanadium (green) on each catalyst. We see that Valor technology is much more tolerant to sulfur (less absorbed), and a result the amount of vanadium captured by the trap is significantly higher.

The increased Vanadium trapping of **Valor®** results in higher activity retention of the FCC Catalyst which ultimately leads to higher conversion compared to other Vanadium passivation technologies.

Image analysis showing improved Sulfur tolerance and vanadium trapping of **Valor®**.



Testing results demonstrating greater activity retnetion of FCC catalyst using **Valor®**.



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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