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.
About Us

BASF is a leading global manufacturer of catalysts for the chemical industry, with solutions across the chemical value chain. The business comprises chemical catalysts and adsorbents, refinery catalysts and custom catalysts. In the process catalysts business, priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions.

The division’s portfolio also includes battery materials and recycling solutions, as well as environmental catalysts and metal solutions. Customers from a variety of industries including Automotive & Transportation, Chemicals, Plastics or Energy & Resources benefit from our innovative solutions. Further information on BASF’s Catalysts division is available on the Internet at www.catalysts.basf.com.

BASF - We create chemistry