

Ti-1100e

High performance titania catalyst

BASF Ti-1100e titania catalyst is designed for improved conversion of sulfur compounds in the Claus process.

Product Applications and Benefits

Ti-1100e is used in Claus converters to ensure maximum H₂S/SO₂ conversion over time. Ti-1100e is resistant to deactivation from sulfation, unlike alumina catalysts.

Ti-1100e is used where COS and CS₂ decomposition is important. Utilizing standard alumina catalysts results in a decrease of COS and CS₂ conversion over time. With Ti-1100e, very high conversion of CS₂ and COS can be maintained for many years of operation.

Ti-1100e titania catalyst is used in combination with BASF DD-431 activated alumina catalysts. BASF works to achieve the maximum conversion through the Sulfur Recovery Unit (SRU) by designing the best possible configuration of the two catalysts. Typically, Ti-1100e is placed at the outlet of the first converter, while the upper section of the bed is filled with BASF DD-431 activated alumina spheres.

Use of Ti-1100e in the Claus section, results in improved H₂S/SO₂ conversion, which means lower SO₂ out of the stack. Optimizing catalysts configuration in the SRU means longer runtime and easier operations.

Packaging

- 1000kg super sacks

Physical Properties

Surface Area, m²/g 110 - 120

Titania XRD Phase Anatase

Crush Strength (1/4" length), N/mm 14

Packed Bulk Density, lbs/ft³ (kg/m³) 56 (900)

LOI (250 - 1100 °C) 1.5 - 2.0

Titania, minimum wt % 90

*These indicative properties do not represent process capabilities nor specifications.

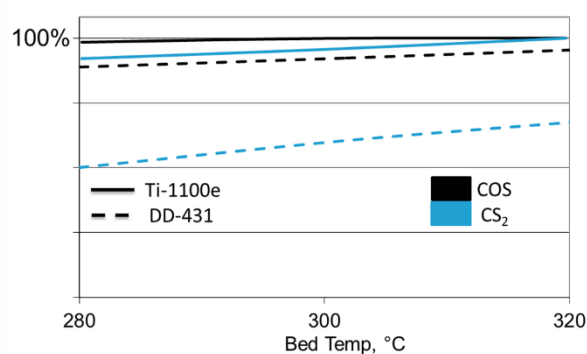


Figure 1: Comparison of COS and CS₂ conversion across BASF titania and alumina at 1000 GHSV hour

Feed Gas Composition

H ₂ S	7.9%	SO ₂	4%
COS	0.05%	CS ₂	0.05%
H ₂ O	30%	N ₂	balance

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BASF - We create chemistry

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