

Ti-1100e

High performance titania catalyst

BASF Ti-1100e titania catalyst is designed to improve conversion of sulfur compounds in Natural Gas and Refinery Sulfur Recovery Units (SRU).

Product Applications

When using a titanium dioxide (titania) catalyst like BASF Ti-1100e, the SRU operator is seeking to achieve maximum sulfur component species conversion over the 3 to 10 year run life of the catalyst.

Units operating with high levels of hydrocarbons and/ or carbon dioxide (CO₂) in the feed will have elevated levels of carbonyl sulfide (COS) and carbon disulfide (CS₂). Activated alumina catalyst, BASF DD-431, will convert these species, but only at elevated operating temperatures which negatively impacts conversion of the two main feed components, hydrogen sulfide (H₂S) and sulfur dioxide (SO₂). By adding Ti-1100e to the first converter, operating temperatures can be lowered and the highest possible conversions of all sulfur species (H₂S, SO₂, COS & CS₂) can be achieved. Normally used in conjunction with BASF DD-431, the configuration needed to optimize recoveries can be provided by BASF's Technical Managers.

Whether it's achieving higher recoveries without capital expenditures, reducing stack emissions though higher COS/CS₂ conversion or energy savings with lower operating temperatures, BASF Ti-1100e can bring an SRU to its peak performance.

Packaging

2204 lb (1000 kg) super sacks

Physical Properties

Titania XRD Phase	Anatase
Crush Strength (1/4" length), N/mm	14
Packed Bulk Density, lbs/ft³ (kg/m³)	56 (900)
Titania, minimum wt %	90

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

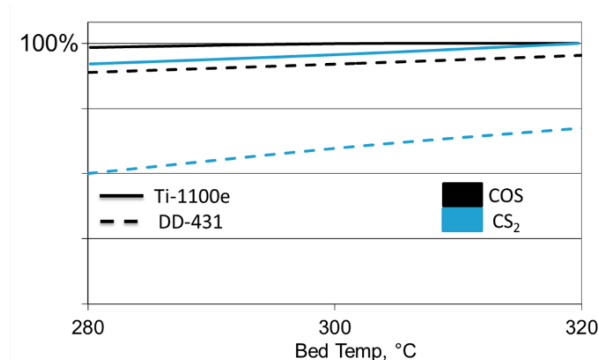


Figure 1: Comparison of COS and CS₂ conversion across BASF titania and alumina at 1000 Gas Hourly Space Velocity (GHSV h⁻¹)

Feed Gas Composition			
H₂S	7.9%	SO₂	4%
COS	0.05%	CS₂	0.05%
H₂O	30%	N₂	balance

About Us

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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.

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