

# 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

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

Units operating with high hydrocarbons and/or carbon dioxide (CO<sub>2</sub>) in the feed will have elevated levels of carbonyl sulfide (COS) and carbon disulfide (CS<sub>2</sub>) in the feed to the first converter. Activated alumina catalyst like 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 (H<sub>2</sub>S) and sulfur dioxide (SO<sub>2</sub>). By adding Ti-1100e to the first converter, operating temperatures can be lowered and the highest possible conversions of all sulfur species (H<sub>2</sub>S, SO<sub>2</sub>, COS & CS<sub>2</sub>) 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 through higher COS/CS<sub>2</sub> conversion or energy savings with lower operating temperatures, BASF Ti-1100e can bring an SRU to its peak performance.

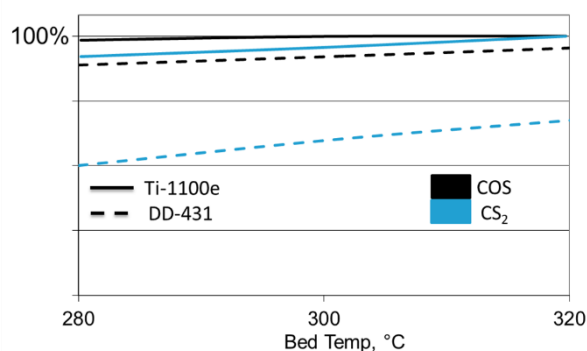
### Packaging

- 2204 lb (1000 kg) super sacks
- 350 lb (150 kg) drums

### Physical Properties

<b>Titania XRD Phase</b>	Anatase
<b>Crush Strength (1/4" length), N/mm</b>	14
<b>Packed Bulk Density, lbs/ft<sup>3</sup> (kg/m<sup>3</sup>)</b>	56 (900)
<b>Titania, minimum wt %</b>	90

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



**Figure 1:** Comparison of COS and CS<sub>2</sub> conversion across BASF titania and alumina at 1000 GHSV hour

### Feed Gas Composition

<b>H<sub>2</sub>S</b>	7.9%	<b>SO<sub>2</sub></b>	4%
<b>COS</b>	0.05%	<b>CS<sub>2</sub></b>	0.05%
<b>H<sub>2</sub>O</b>	30%	<b>N<sub>2</sub></b>	balance

## About Us

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