

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 (CO₂) in the feed will have elevated levels of carbonyl sulfide (COS) and carbon disulfide (CS₂) 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 (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 through 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
- 350 lb (150 kg) drums

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)

Titania, minimum wt % 90

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

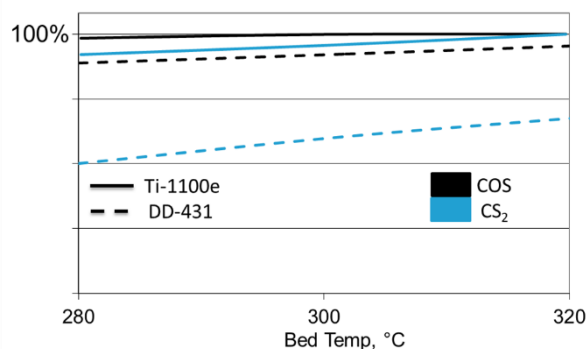


Figure 1: Comparison of COS and CS₂ conversion across BASF titania and alumina at 1000 GHSV hour

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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Americas

BASF Corporation
25 Middlesex/Essex Turnpike
Iselin, New Jersey, 08830, USA
Tel: +1-732-205-5000
Fax: +1-732-205-7725
Email: catalysts-america@basf.com

Asia Pacific

BASF (China) Company Limited
300 Jiang Xin Sha Road,
Pudong, Shanghai 200137
P.R. China
Tel: +86-21-2039 2549
Fax: +86-21-2039 4800-2549
Email: catalysts-asia@basf.com

Europe, Middle East, Africa

BASF De Meern BV Catalysts
The Netherlands
Tel: +31-30-666 9437
Email: catalysts-europe@basf.com

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