

## DD-431

### Activated alumina spheres

**BASF DD-431 is a high surface area activated alumina sphere with tailored pore size distribution to enhance Claus reaction activity through increased diffusion rates and surface activity.**

#### Product Application and Benefits

DD-431 is an excellent Claus catalyst for common Sulfur Recovery Units (SRU) including oxygen enriched Claus units. It is designed for use in all beds for high activity conversions of H<sub>2</sub>S/SO<sub>2</sub> and for conversion of COS and CS<sub>2</sub> in the first converter. It is available in nominal sizes of 3/16" and 1/4" spheres.

The custom tailored pore structure includes optimum levels of micro, meso and macropores, thereby providing maximum access to active sites while minimizing sulfur deposition (condensation) during normal operations. DD-431's meso and macropores aid in the diffusion of the reactants into, and the large sulfur molecules away from, active sites. DD-431 has ideal pore distribution for use in sub-dewpoint tail gas processes such as CBA, MCRC and Sulfreen.

DD-431 is particularly well suited for use in sulfur recovery processes operated near or below the sulfur dewpoint. The third reactor of a Claus unit can be operated closer to the sulfur dewpoint to enhance sulfur recovery.

#### Packaging

- 2000 lb super sacks

#### Chemical Composition (wt %)

Al <sub>2</sub> O <sub>3</sub>	93.0
SiO <sub>2</sub>	0.02
Fe <sub>2</sub> O <sub>3</sub>	0.02
Na <sub>2</sub> O	0.30
LOI (1000° C)	6.5

#### Physical Properties

	3/16" (4.8 mm)	1/4" (6.4 mm)
Surface Area, m <sup>2</sup> /g	375	360
Total Pore Volume, cc/g	0.55	0.55
Macroporosity > 750 Å, cc/g	0.18	0.15
Crush Strength (5 mesh), lbs (kg)	30 (14)	50 (23)
Abrasion Loss, wt %	0.4	0.4
Bulk Density, lbs/ft <sup>3</sup> (kg/m <sup>3</sup> )	40 (641)	40 (641)

## About Us

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success.

**BASF - We create chemistry**

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