



The Chemical Company

DD-431

Activated alumina spheres

Product data

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. BASF DD-431 is available in nominal sizes of 3/16" and 1/4" spheres.

Product application & benefits

BASF DD-431 is an excellent Claus catalyst for common sulfur unit designs including oxygen enriched Claus units. It is designed for use in all beds for

high activity conversions of H₂S/SO₂ and for conversion of COS and CS₂ in the first converter.

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 the active sites.

BASF 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.

BASF DD-431 has ideal pore distribution for use in sub-dewpoint tail gas processes such as CBA, MCRC, and Sulfreen.

Available packaging

- 2000 lb super sacks

About BASF

As the world's leading chemical company, BASF's portfolio ranges from chemicals, plastics, performance products, agricultural products and fine chemicals to crude oil and natural gas. BASF's intelligent system solutions and high-value products help its customers to be more successful. BASF develops new technologies and uses them to open up additional market opportunities. It combines economic success with environmental protection and social responsibility, thus contributing to a better future.

Chemical composition (%)	
Al ₂ O ₃	93.0
SiO ₂	0.02
Fe ₂ O ₃	0.02
Na ₂ O	0.30
LOI (1000°C)	6.5

Physical properties	3/16" (4.8mm)	1/4" (6.4mm)
Surface area, m ² /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 ³ (kg/m ³)	40 (641)	40 (641)

All data represent typical product properties and are based upon BASF standard test methods. All test methods are available upon request. Information presented herein is believed to be accurate and reliable but does not imply any guarantee or warranty by BASF.

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