

Selexsorb® As

Copper oxide on alumina based spherical adsorbent for the removal of arsine and phosphine

BASF Selexsorb® As is a smooth alumina-based adsorbent, impregnated with copper oxide as active component to provide optimum adsorption capacity for arsine, phosphine and sulfur compounds.

BASF Selexsorb® As is an adsorbent in spherical form with a nominal size of 1/8".

Product Applications

Due to its high surface area and ultrafine copper crystallite size, Selexsorb® As provides for excellent removal of arsine, phosphine, H₂S and COS from process and product streams. Selexsorb® As is used in the purification of refinery, chemical and polymer grades of propylene. Typical applications include propylene at the front end of cumene, Oxo-C4 and polypropylene units. Typical operating temperature for this type of application is between ambient temperature and up to 50 or 60°C / 120 or 140°F.

Depending on the application, Selexsorb® is being used in combination with a regenerative system upstream consisting of Selexsorb® COS/COSi and Selexsorb® CD/CDL. This can be the case, if higher amounts of COS need to be removed or in the presence of mercaptans or sulfides.

Before using the material, a drying step is required. This can either be done via a special operation (dedicated drying step up to 250°C / 480°F) or on-stream. A procedure for drying the material is available. Alternatively, BASF can offer a pre-dried version of the material. This material is referred to as Selexsorb® As D.

Alternatives for Selexsorb® As are the newly developed Selexsorb® AS5 or materials with higher CuO content like PuriStar® R3-12 or R3-22, which offer higher capacities for the components indicated for the same volume filled.

For streams containing H₂ beyond certain limits, a reduction of the material is required.

Please contact BASF for further details.

Packaging

- 2000 lb (907.185 kg) FIBC (super sacks)
- 330 lb (149.685 kg) steel drums

The pre-dried version (Selexsorb® As D) is only available in steel drums.

Shipping Point

Vidalia, LA, U.S.A. or Natchez, MS, U.S.A.

Chemical Composition (%)

Copper Oxide, wt. %	Approx. 10
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Al ₂ O ₃ plus proprietary modifier	Rest
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LOI (250-1100° C)	3.0
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Selexsorb As D only:

MOI (ambient – 250°C)	Max. 0.5
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Typical Physical Properties

Surface Area, m ² /g	190
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Crush Strength, lbs (kg)	20 (9.0)
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Bulk Density, lbs/ft ³ (kg/m ³)	50 (800)
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About Us

BASF is a leading global manufacturer of catalysts for the chemical industry, with solutions across the chemical value chain. The business comprises chemical catalysts and adsorbents and custom catalysts. Priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions.

BASF's chemical catalysts and adsorbents business is part of the company's Performance Chemicals division. The division's portfolio also includes refinery catalysts, fuel and lubricant solutions, as well as oilfield chemicals and mining solutions. Customers from a variety of industries including Chemicals, Plastics, Consumer Goods, Energy & Resources and Automotive & Transportation benefit from our innovative solutions.

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chemical-catalysts-and-adsorbents.basf.com

Americas

BASF Corporation

Phone: +1-732-205-5000

Email: catalysts-america@basf.com

Asia Pacific

BASF (China) Company Limited

Phone: +86-21-2039 2549

Email: catalysts-asia@basf.com

Europe, Middle East, Africa

BASF Services GmbH

Tel: +49-30-2005 5000

Email: catalyst-europe@basf.com

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