

# Selexsorb® CDi

## Improved Alumina based adsorbent for the removal of polar compounds

**BASF Selexsorb® CDi is custom formulated to provide optimum adsorption of polar compounds from reactive olefinic streams.**

BASF Selexsorb® CDi is available as spheres with nominal sizes of 7x14 Tyler mesh (approx. 1.6 mm) and 1/8" (approx. 3.2 mm).

Selexsorb® CDi provides the benefits of enhanced capacity for impurities with reduced surface activity and lower bulk density. Together they provide for longer life and overall higher capacity even towards end of life while reducing the amount of adsorbent needed. All parameters together will lead to a reduction of regeneration gas and energy needed increasing the sustainability of this product.

CDi is the new preferred Selexsorb® material for removing polar contaminants from reactive process streams, especially ethylene, propylene and butenes. Typical contaminants to be removed with Selexsorb® CDi include water, oxygenates (alcohols, aldehydes, ketones, ethers, peroxides), mercaptans, sulfides and nitrogen-based molecules (ammonia, amines, nitriles).

### Product Applications

1. BASF Selexsorb® CDi is custom formulated to remove trace contaminants from feed monomer (ethylene, propylene), feed comonomer ( $\alpha$ -olefins) and recycle solvent streams in polymer production processes including polyethylene and polypropylene. Polymerization catalyst deactivation is minimized through the removal of these contaminants with BASF's selective Adsorbents.

2. Removal of oxygenates from C4 raffinate stream used in metathesis processes is another important

application of this adsorbent. The removal of the oxygenates ensures optimal catalyst activity and life. Examples of such oxygenates are methanol, dimethyl ether, tertiary butyl alcohol, acetaldehyde and ketones. In the presence of reactive olefinic species Selexsorb® CDi offers better capacity and performance than Selexsorb® CD or CDL and thus is the preferred solution for these applications.

3. Hydrocarbon feed streams used in petrochemical or refining catalytic processes frequently contain trace contaminants that can adversely affect the performance of downstream catalysts. BASF Selexsorb® CDi is an excellent adsorbent for removing trace oxygenates, sulfides and mercaptans and other such species from feed streams to isomerization and alkylation processes.

Selexsorb® CDi can also be used in combination with Selexsorb® COS or Selexsorb® COSi. For further information, please contact BASF.

### Chemical Composition

Al <sub>2</sub> O <sub>3</sub> plus proprietary modified	95.5
LoI (250 – 1 100°C)	4.0

### Typical Physical Properties

Surface Area, m <sup>2</sup> /g	440
Crush Strength, kg (lbs)	1,4 – 3,2 (3 – 7)
Bulk Density kg/m <sup>3</sup> (lbs/ft <sup>3</sup> )	590 (37)

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

For proper handling of the material, especially when bringing the adsorbent in contact with olefins, please contact BASF for further details.

### Packaging

- FIBC (flexible intermediate bulk container), 680 kg / 1 500 lbs net
- Steel drums tbd net

### Shipping Point

Vidalia, LA, USA, or Natchez, MS, USA  
(BASF warehouse)

## 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, adsorbents and custom catalysts. In the process catalyst business, priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions.

BASF's chemical catalysts and adsorbent 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.

**BASF - We create chemistry**



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### Americas

BASF Corporation

Phone: +1-732-205-5000

Email: [catalysts-america@basf.com](mailto:catalysts-america@basf.com)

### Asia Pacific

BASF (China) Company Limited

Phone: +86-21-2039 2549

Email: [catalysts-asia@basf.com](mailto:catalysts-asia@basf.com)

### Europe, Middle East, Africa

BASF Services Europe GmbH

Phone: +49-30-2005 5000

Email: [catalysts-europe@basf.com](mailto:catalysts-europe@basf.com)

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