

# Selexsorb CDX

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

**BASF Selexsorb® CDX is custom formulated to provide optimum adsorption for a wide range of polar organic compounds.**

BASF Selexsorb CDX is available as spheres with nominal sizes of 1/16" (7 x 14 Mesh) and 1/8".

### Product Applications

1. The isobutylene feed stream to MTBE (methyl tertiary butyl ether) processes often contains nitrogen and sulfur based organic contaminants which can deactivate the ion exchange resin type etherification catalyst. Likewise, isoamylene feed streams to TAME (tertiary amyl methyl ether) production processes contain impurities which adversely affect the macroporous ion exchange resin catalyst as well as the palladium impregnated hydrogenation catalyst installed in TAME process reactors. BASF Selexsorb CDX is an excellent selective adsorbent for the removal of the following contaminants from isobutylene and isoamylene feed streams to these etherification processes: ammonia; acetonitrile; propionitrile; dimethyl formamide; various amines; dimethyl sulfide; dimethyl disulfide; thiophenes as well as H<sub>2</sub>O and methyl, ethyl and propyl mercaptans.

2. The C<sub>4</sub> raffinate stream from MTBE production processes and the C<sub>5</sub> raffinate stream from TAME production processes contain oxygenates which often require removal to assure a contaminant-free feed. Removal of oxygenates such as methanol, dimethyl ether, tertiary butyl alcohol, MTBE, and TAME from these raffinate streams can be accomplished by use of BASF Selexsorb CDX.

3. BASF Selexsorb CDX is custom formulated to remove a wide variety of nitrogen, sulfur and oxygen-based organic contaminants from liquid hydrocarbon feed streams to catalytic processes such as isomerization, dehydrogenation and hydrogenation. Catalyst protection is assured with the use of BASF's selective adsorbents. By its formulation, Selexsorb CDX extends the range of impurities to be removed compared to Selexsorb CD.

Selexsorb CDX can also be used in combination with Selexsorb COS or Selexsorb COS*i*. For further information, please contact BASF.

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

### Packaging

- 1900 lb super sacks
- 300 lb steel drums

### Chemical Composition (%)

**Al<sub>2</sub>O<sub>3</sub> plus proprietary modifier** 95.1

**LOI (250-1100°C)** 4.5

<b>Typical Physical Properties</b>	<b>7x14 Tyler mesh (2.0mm)</b>	<b>1/8" (3.2mm)</b>
<b>Surface Area, m<sup>2</sup>/g</b>	460	450
<b>Crush Strength, lbs (kg)</b>	9 (4)	25 (11)
<b>Bulk Density, lbs/ft<sup>3</sup> (kg/m<sup>3</sup>)</b>	41.5 (665)	41.5 (665)

## 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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