



Adsorbents and Catalyst

ACTIVATED
ALUMINAS

Selexsorb[®]
COS

PRODUCT
DATA

Adsorbent for removing COS, CO₂, H₂S and CS₂ from hydrocarbon streams

Product Information

Selexsorb[®] COS is a smooth, spherical adsorbent which has demonstrated its superior performance in selectively removing COS, CO₂, H₂S, and CS₂ from hydrocarbon streams. Selexsorb COS is available as 7 x 14 Tyler mesh, and 1/8 inch or 3/16 inch spheres packaged in vapor barrier drums.

Applications

1. Polypropylene manufacturers have found Selexsorb COS of extraordinary value in protecting today's high activity Ziegler-Natta catalysts from COS poisoning. Conventional methods of treating are being supplemented or replaced by the Selexsorb COS adsorption process. Operating plants using Selexsorb COS report that COS can be removed to <20 parts per billion by weight (ppbw).
2. Polyethylene manufacturers have found Selexsorb COS to be effective in removing CO₂ to levels <200 ppbw.
3. C₂ to C₄ polyunsaturated monomer streams often contain undesirable ppmw levels of water, sulfur compounds, and inhibitors. Selexsorb COS has been successfully used to treat many of these streams, thereby improving polymer product quality and yield.

4. C₃ and C₄ hydrocarbon streams are also being treated with Selexsorb COS to remove water, COS, H₂S, and CS₂.

5. In catalytic reforming processes, petroleum refiners have found Selexsorb COS to be effective in adsorbing H₂S and water from the recycled H₂ stream.

6. Selexsorb COS should be considered as part of the performance protection and life enhancement program for any refinery or petrochemical catalyst that is sensitive to sulfur compounds.

Typical Properties of Selexsorb® COS

Physical

	7 x 14 Tyler mesh (2.0 mm)	1/8 inch (3.2 mm)	3/16 inch (4.8 mm)
Surface area (m ² /gram)	280	270	270
Total pore volume (cc/gram)	0.5	0.5	0.5
Alumina XRD phase	Amorphous chi, & gamma	Amorphous chi, & gamma	Amorphous chi, & gamma
Crush Strength lbs (kgs)	9 (4)	31 (14)	47 (21)
Packed bulk density lbs/ft ³ (kgs/m ³)	49 (785)	49 (785)	49 (785)

Chemical

Al ₂ O ₃ + Proprietary Modifier (wt%)	93.1
SiO ₂ (wt%)	0.02
Fe ₂ O ₃ (wt%)	0.02
Na ₂ O (wt%)	0.30
LOI (250 - 1200°C) (wt%)	6.5

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MSDS Number-587

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