

DARCO[®] MRX ACTIVATED CARBON FOR HYDROCARBON SWEETENING

- ◆ Specifically manufactured as catalyst support carbon for hydrocarbon sweetening
- ◆ Pore distribution designed to slow down fouling of the catalyst and prolong catalyst life
- ◆ High bed strength to prevent crushing of the carbon bed and lower fines generation
- ◆ Recommended by leading hydrocarbon sweetening technology providers

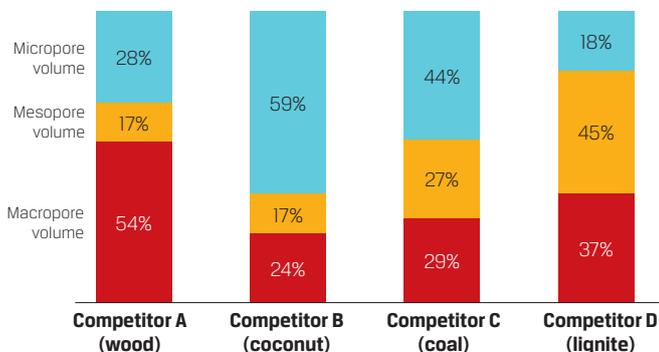
Performance

The traditional hydrocarbon sweetening process is used for extraction and removal of mercaptans from liquified petroleum gases (LPG), or from heavier hydrocarbons fractions like naphthas, jet fuels, kerosene or diesel. The process relies on a special catalyst to accelerate the oxidation of mercaptans to disulfides at or near the product's economical rundown temperature. For heavier hydrocarbons activated carbon is used as a catalyst carrier to oxidize the mercaptans.

Activated carbon is the primary source of contact between hydrocarbon, caustic and catalyst in fixed-bed hydrocarbon sweetening processes. Specifically manufactured as a catalyst support for hydrocarbon sweetening, DARCO MRX activated carbon delivers optimized mesopore and macropore volume in combination with sufficient bed strength. This product is designed to slow the fouling of the catalyst by extremely heavy hydrocarbons, and therefore increases the lifespan of the catalyst. The higher bed strength prevents crushing of the activated carbon bed and results in low fines generation.

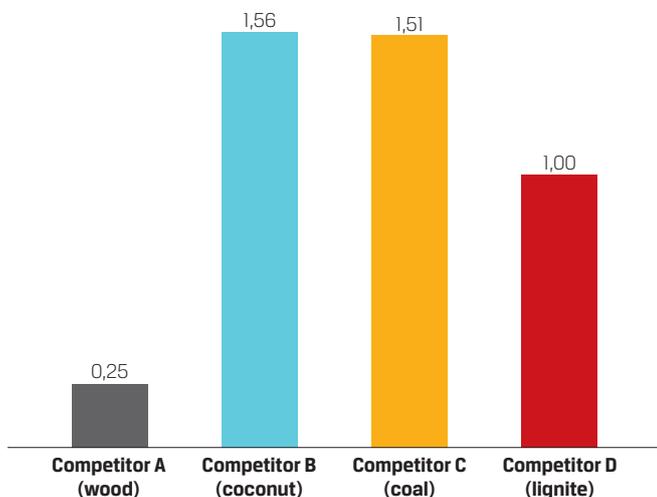


Pore volume and bed strength comparison of DARCO MRX vs. competitive activated carbons



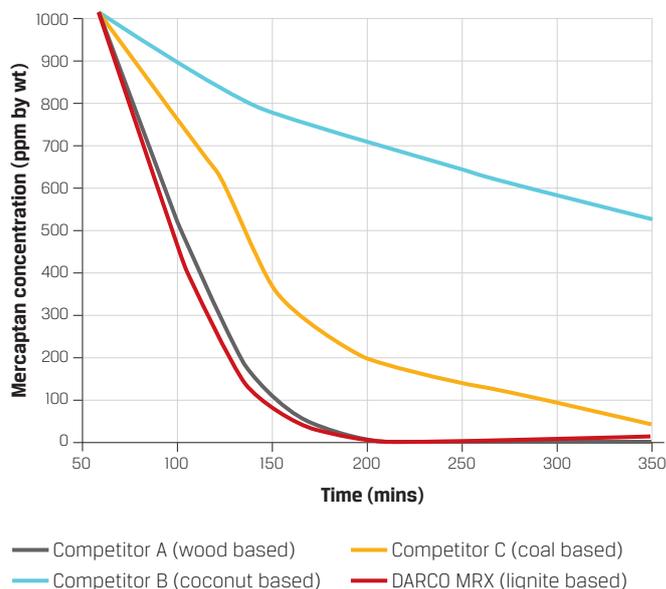
Higher mesopore and macropore volume of DARCO MRX activated carbon products suggests greater capacity to prevent catalyst fouling and quicker mercaptan conversion.

Bed strength comparison of DARCO® MRX activated carbon vs. competitive activated carbons



Higher bed strength of DARCO MRX activated carbon means longer lifespan of the catalyst.

Rate at which DARCO MRX activated carbon removes mercaptans vs. competitive activated carbons



Graphs compiled using data from US Patent US20070123419 A1.

Process information

- ◆ Catalyst lifetime is estimated to be over five years
- ◆ To offset gradual catalyst deactivation, excess air can be added, the operating temperature can be increased slightly, or more frequent caustic circulation can be performed
- ◆ Catalyst reactivation is typically required once a year - the carbon containing the catalysts is water-washed, steamed, re-alkalized and returned to service
- ◆ Catalysts can also undergo re-impregnation once the catalyst activity restoration is deemed insufficient
- ◆ Onsite trainings, application information and samples for testing and analysis are available upon request

Our sales, technical service and customer service teams are prepared to serve customers around the world. Contact us at cabotcorp.com/activatedcarboncontact



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