

Product Bulletin

CENTAUR® HSV GRANULAR ACTIVATED CARBON

Description

CENTAUR® HSV* is a vapor phase virgin activated carbon that has been developed specifically for odor removal from sewage treatment operations. This bituminous coal-based product is unique in that it provides high adsorption capacity for H₂S without chemical impregnants and adsorbs volatile organic compounds (VOCs) in an effective manner. CENTAUR HSV, by its catalytic functionality, oxidizes H₂S and converts it to water soluble sulfur compounds. As a result, H₂S capacity can be restored simply by water washing the carbon, eliminating safety concerns typically encountered with alkali impregnated carbons. CENTAUR HSV is capable of being thermally reactivated which eliminates the disposal concerns associated with alkali impregnated carbons.

Applications

CENTAUR HSV can be utilized for odor removal in sewage treatment applications. The product is ideal for use at pump stations and treatment plants where H₂S and organic odors are a problem. On-site water regeneration and eventual thermal reactivation minimize operating and disposal costs.

Regeneration

When odor breakthrough due to H₂S occurs, the spent carbon can be regenerated in place. The H₂S capacity can be restored by water washing of the CENTAUR HSV carbon. Regeneration efficiency and the number of regeneration cycles depend on the loadings of H₂S and VOCs. For details on regeneration and cycle determination, please contact Calgon Carbon Corporation in Pittsburgh, Pennsylvania.

* Purchase of this product from Calgon Carbon Corporation includes a license under the following U.S. Patents: Numbers 5356849 and 5494869.

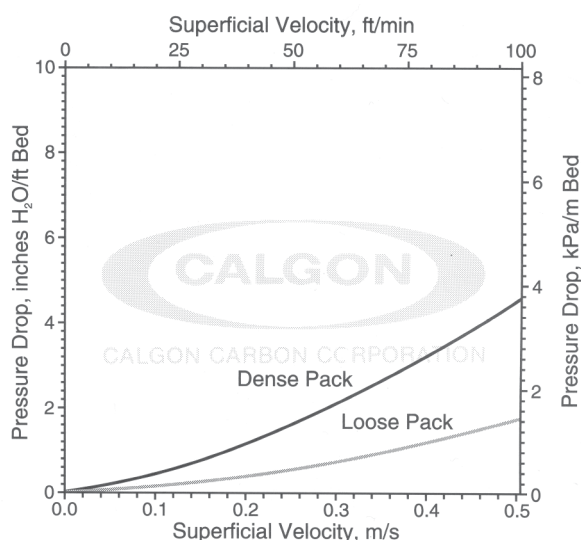
Properties

H ₂ S Capacity, g H ₂ S/cc carbon*:	0.09 min
Butane Activity, weight %	15.6 min
Iodine No, mg/g:	800 min
Ash, weight %:	7 max
Moisture, weight %, as packed:	4 max
Apparent Density, g/cc:	0.56 min
Hardness No:	97 min
Mean Particle Diameter:	3.7 mm

U.S. Sieve Series

Percent on 4 mesh	15 max
Percent through 7 mesh	8 max

* Peroxide number utilizes the rate of decomposition of hydrogen peroxide by the carbon and is an indicator of the amount of catalytic activity. The lower the number, the more active the product is in terms of its ability to accelerate a chemical reaction.



Manufacturing

Catlettsburg, KY

Packaging

225 lb (102.3 kg) fiber drum



Visit our website at www.calgoncarbon.com, or call 1-800-4-CARBON to learn more about our complete range of products and services, and local contact information.

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Carbon**

DESIGN CONSIDERATIONS

Effective removal of H₂S requires the gas stream to contain at least an equivalent amount of oxygen and relative humidity above 10%. Condensation of water on the carbon will reduce its performance, and devices to prevent free condensation are recommended. Additionally, if CENTAUR HSV is used to control VOCs it is recommended that the relative humidity be controlled to below 50% to maximize carbon utilization. CENTAUR HSV can be utilized in a typical fixed bed mode with superficial velocities up to 100 fpm. The bed depth can range from 12" to 36" depending on the on-stream time and water wash frequency desired. For assistance in the design of a carbon system, please contact Calgon Carbon Corporation in Pittsburgh, Pennsylvania.

FEATURES

- Not chemically impregnated
- Metallurgical grade high purity coal
- Catalytic Activity
- Pore volume not consumed by impregnant
- Enhanced adsorption pore volume
- Ability to be water washed
- Ability to be thermally reactivated

BENEFITS

- Heat excursion potential caused by impregnants is eliminated thus making operations safer.
- Organic capacity is significantly higher than impregnated carbons thus reducing operating costs.
- Extreme hardness and abrasion resistance which reduces carbon attrition problems and pressure drop increase over time.
- Since multiple water washes are possible, Centaur HSV is capable of treating higher H₂S concentrations typically handled by chemical wet scrubbers.
- In contrast to impregnated carbons, Centaur HSV has organic capacity equal to or higher than other virgin coal based carbons.
- Centaur HSV has been specifically designed to show enhanced organic capacity at low contaminant concentrations typically found in sewage treatment plants.
- In H₂S service, Centaur HSV can be field regenerated by water washing multiple times, thus eliminating safety concerns experienced with alkali regeneration and chemical handling.
- Centaur HSV can be thermally reactivated, thus spent carbon disposal problems are eliminated.

Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all applicable federal and state requirements.



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