



Description

CENTAUR® HSV* is a vapor phase virgin granular activated carbon that has been developed specifically for odor removal from sewage treatment operations. This agglomerated bituminous coal-based product is unique in that it **provides the highest adsorption capacity for H₂S in the industry** 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 the 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 is designed 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 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 the Calgon Carbon Technical Sales Representative for your area.

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

Features

| | |
|--|--|
| Not chemically impregnated | Heat excursion potential caused by impregnants is eliminated thus making operations safer. |
| Metallurgical grade high purity coal | Organic capacity is significantly higher than impregnated carbons thus reducing operating costs. |
| Catalytic Activity | Since multiple water washes are possible, CENTAUR® HSV is capable of treating higher H ₂ S concentrations typically handled by chemical wet scrubbers. |
| Pore volume not consumed by impregnant | In contrast to impregnated carbons, CENTAUR® HSV has organic capacity equal to or higher than other virgin coal-based carbons. |
| Enhanced adsorption pore volume | CENTAUR® HSV has been specifically designed to show enhanced organic capacity at low contaminant concentrations typically found in sewage treatment plants. |
| Ability to be water washed | In H ₂ S service, CENTAUR® HSV can be field regenerated by water washing multiple times, thus eliminating safety concerns experienced with alkali regeneration and chemical handling. |
| Ability to be thermally reactivated | Spent CENTAUR® HSV can be returned to Calgon Carbon for thermal reactivation, thus eliminating spent carbon disposal problems. |

Manufacturing

CENTAUR® HSV activated carbon is manufactured by Calgon Carbon Corporation in the United States and is held to ISO 9001:2000 quality standards

Properties

| | |
|--|--|
| Ultimate H ₂ S Capacity | 0.69 g H ₂ S/ml Carbon**(min) |
| Initial H ₂ S Capacity | 0.09 g H ₂ S/ml Carbon (min) |
| Iodine Number | 800 mg/g (min) |
| Butane Activity, weight | 15.6% (min) |
| Ash, weight | 7% (max) |
| Moisture, as packed by weight | 4% (max) |
| Hardness Number | 97 (min) |
| Apparent Density | 0.56 g/cc (min) |
| Mean Particle Diameter | 3.6 mm (min) |
| Screen Size by weight, U.S. Sieve Series | |
| On 4 mesh | 15% (max) |
| Through 10 mesh | 2.0% (max) |

**The determination of ultimate H₂S breakthrough capacity is based upon its ability to be regenerated 10 times. The determination of initial H₂S breakthrough capacity will be made by passing a moist (85% R.H.) air stream containing 1% H₂S at a rate of 1,450 cc/min through a 1" diameter by 9" deep bed of uniformly packed activated carbon and monitored to 50 ppm breakthrough. Results are expressed in grams H₂S removed per cc of carbon.

Benefits



Design Considerations

Effective removal of H₂S requires the gas stream to contain at least an equivalent amount of oxygen and relative humidity above 10%. Since condensation of water on the carbon will reduce its performance, devices to prevent free condensation are recommended. CENTAUR® HSV can be used 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 the Calgon Carbon Technical Sales Representative for your area.

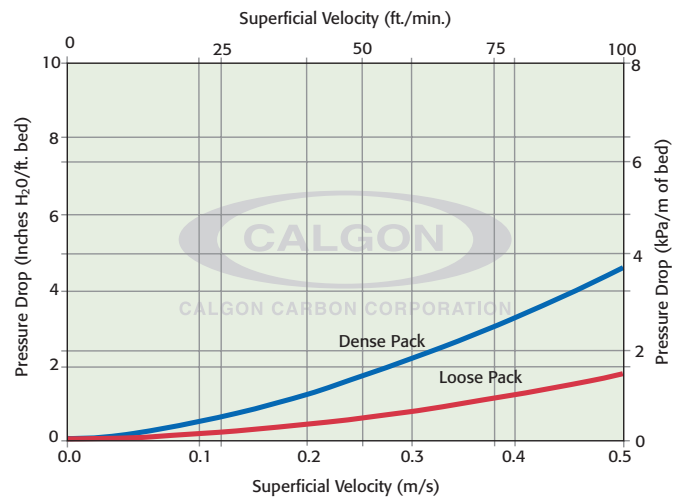
Safety Message

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.

Packaging

- 225 lb. (102 kg) fiber drum
- 1,000 lb. (454 kg) super sack

Pressure Drop



CALGON CARBON CORPORATION

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA USA 15230-0717
1-800-422-7266
Tel: 412-787-6700
Fx: 412-787-6713

Making Water and Air Safer and Cleaner

Chemviron Carbon
European Operations of
Calgon Carbon Corporation
Zoning Industriel C de Feluy
B-7181 Feluy, Belgium
Tel: + 32 (0) 64 51 18 11
Fx: + 32 (0) 64 54 15 91

Calgon Carbon Asia
65 Chulia Street
#37-03 OCBC Centre
Singapore 049513
Tel: +65 6 221 3500
Fx: +65 6 221 3554

Your local office

