

WS-480 PELLETED ACTIVATED CARBON

Description

WS-480 is a high activity virgin pelleted activated carbon designed for use in gas phase applications. It is an extruded coal-based product activated at a high temperature in a steam atmosphere. The 4mm pellet diameter minimizes the pressure drop. The selection of raw material and manufacturing process result in high mechanical strength properties, maximizing the cost effectiveness of thermal reactivation. WS-480 offers effective VOC and hydrocarbon emission control and exceptional performance and economics when treating contaminant concentrations in excess of 2000 ppmv.

Applications

Some of the typical applications for WS-480 activated carbon include:

- Solvent Recovery
- Gas Processing and Purification
- VOC Control
- Catalyst/Support
- HVAC

Design Considerations

The design of an activated carbon adsorption system is dependent on the adsorbate type, influent concentration, temperature, flow rate, performance objective, and other factors. Calgon Carbon can help evaluate the suitability of activated carbon to satisfy specific needs and assist in the design of an adsorption system. In addition to the supply of activated carbon, Calgon Carbon offers adsorption systems and carbon reactivation services to meet particular treatment objectives. For additional information on adsorption capacity of organic compounds, please contact the Calgon Carbon Technical Sales Office in your area.

Packaging

500 kg supersack 180 lb fiber drum When designing an activated carbon adsorption system, Calgon Carbon Corporation recommends that the dense-packed pressure drop be used for fan sizing, since activated carbon will settle during use. The loose-packed pressure drop will probably occur during start-up of the system. The typical apparent density of this product is 0.39 g/cc (24 lb/ft³). In practice, the loose-packed density is approximately 0.32 g/cc (20 lb/ft³).

Specifications

Butane Activity	31 min
Carbon Tetrachloride Number	80 min
Moisture, weight%, as packed	5 max
Pellet Diameter	4 mm
Hardness	90 min
Screen Size, U.S. Sieve series, weight%	
through 6 mesh	7 max

Pressure Drop Curve



Carbon and Process Media

Visit our website at www.calgoncarbon.com, or call 800-422-7266 to learn more about our complete range of products and services, and obtain local contact information.



CPM-0005-1003

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Features

Raw Material:

Coal

Particle Construction:

- Coal is pulverized and reagglomerated with suitable binder
- No chemical additives; only carbonaceous materials used
- Pellet shape

Activation Process:

- Thermal activation with reducing atmosphere (steam)
- All carbon structure suitable for multiple cycles of in-situ regeneration or high temperature reactivation

Benefits

- Produces a pore structure for the adsorption of a broad range of contaminants and concentrations.
- Higher density results in high volume activity and economical adsorber design.
- Creates optimal transport paths for faster adsorption/desorption, especially important for catalyst and chemical conversion processes.
- Generates the hardness and abrasion resistance required for in-situ regeneration and thermal reactivation.
- Higher purity carbon with less chance of adverse chemical reactions.
- · Low pressure drop.
- No residual activation chemicals to interfere with application.
- Allows for ultimate destruction of adsorbed organics with minimal loss of the original carbon structure.
- Allows for the reuse of the carbon and eliminates disposal problems.

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.

Visit our website at www.calgoncarbon.com



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