FLUEPAC® SF3

Powdered Activated Carbon

Applications

Flue Gas

Environmental Air

Description

Fluepac SF3 is a high-performance brominated powdered activated carbon (PAC) that is specially formulated to enhance mercury capture in challenging flue gas treatment applications, such as flue gas streams with elevated levels of SO_3. Although designed for challenging streams, its unique formulation allows for improved performance at drastically reduced injection rates in any situation where a brominated PAC is required. Fluepac SF3 is injected directly into the flue gas stream and is easily removed by existing particulate control devices. The reduced ratio of carbon to fly ash and the product's inherent concrete friendliness preserves the fly ash suitability for sale or non-hazardous disposal.

Fluepac SF3 has been proven to be particularly effective in applications where there are elevated sulfur trioxide (SO_3) levels in the flue gas (such as coal-fired boilers burning high-sulfur coals). In the presence of SO_3, mercury is much more difficult to remove with standard activated carbons. The performance improvement that can be expected by using Fluepac SF3 is illustrated in Figure 1, on a unit where halogen addition is crucial, which compares the performance of Fluepac SF3 to a competitor's industry standard brominated PAC. With a utility burning a Powder River Basin (PRB) coal, injection downstream of the air pre-heater (APH) and an electrostatic precipitator (ESP), Fluepac SF3 demonstrated a dramatic improvement over the standard product. The target of a 90% mercury removal was easily attainable with Fluepac SF3, while the standard grade product would have had great difficulty. The high removal rates are achieved at lower carbon usage rates and total treatment costs than with standard grade carbons.

Features / Benefits

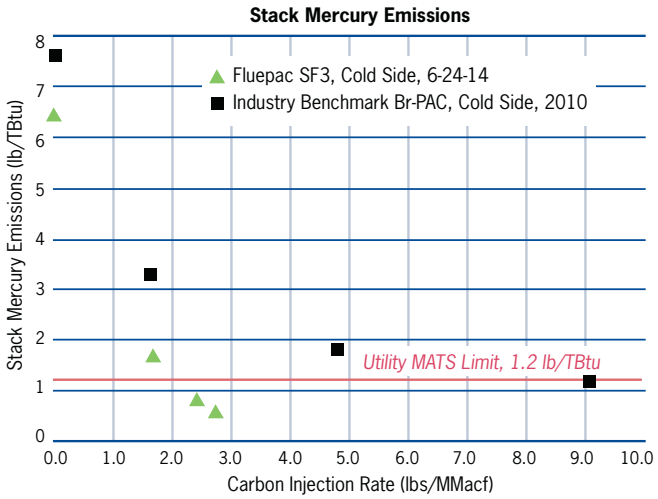
- Large number of high-energy pores for mercury capture
- Good transport pore structure
- Concrete-friendly product
- Excellent flowability and minimal volatile content
- Sulfur tolerant formulation
- Product has demonstrated the ability to remove greater than 95% of mercury from flue gas
- Rapid adsorption kinetics lead to low required contact times
- Can be used over a wide range of temperatures

Specifications	Fluepac SF3
Moisture, as packed by Weight	12% (max)
Sieve Size by volume (laser analysis)	
<100 US Mesh	100% (min)
<325 US Mesh	95% (min)

Typical Properties*	Fluepac SF3
Apparent Density (tamped)	0.4–0.8 g/cc
Ignition Temperature	>350°C

*For general information only, not to be used as purchase specifications.

Figure 1: Performance of Fluepac® SF3 Against a Competitor's Standard Carbon



Data taken from site burning PRB coals with ESP

Safety Message

Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

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