

Wastewater Carbon Adsorption Vessels

Resin: Vipel® K022-C vinyl ester
E84 Class 1 fire rating with
minimal antimony oxide addition

**Composite
Application:** Carbon adsorption vessels
Ducting
Isolation Dampers

Dimensions: Vessel diameters:
Two Each 12 and 14 ft
(3.7 and 4.3 m)

Ducting diameters:
54 in (137 cm)

Ducting lineal total:
4,000 ft (1,220 m)

**Design
Temperature:** 180° F (82°C)

Installed: 2002

Location: Village Creek
Wastewater Treatment Plant
Birmingham, AL, USA



In odor abatement, carbon adsorbers are used to remove H₂S from select points throughout the waste water treatment plant. For the vessels holding the carbon media, Belco Manufacturing, Belton, TX, USA, relies on the processing and performance characteristics of Vipel® K022-C vinyl ester.

The vessels must resist long-term exposure to the moisture laden hydrogen sulfide environment. To meet requirements for safety, the vessels and ducting must also meet E84 Class 1 requirements for flame retardance. “Because it is formulated to give us the viscosity we need, Vipel® K022-C is easy to manage and process,” says Belco Operations Manager Rick Ramirez. “The resin system processes well in chopper gun as well as filament winding and hand lay-up operations. We can make laminates up to one-inch (25 mm) thick with minimal warpage.”