AOC®
World Leader in Resin Technology

Vipel®
CORROSION
RESISTANT RESINS

Vipel® Corrosion-Resistant Resins for **Composite Storage Tanks and Pipes**

- Fiber-reinforced polymer (FRP) composites made with Vipel® resins offer superior resistance to corrosive environments. Composites made with AOC are durable, cost-effective alternatives to carbon steel, stainless steel, aluminum exotic alloys, concrete and wood. Vipel resins eliminate the need for coatings, ongoing maintenance and frequent replacement. For both aboveground and underground applications, AOC technologies resist internal and external corrosive attack.

- AOC resin technology for piping and storage vessels has been proving itself in thousands of applications around the world. For example, large diameter pipe made with AOC resin in 1981 is still serving a desalination plant in the Middle East. And a gasoline storage tank made with AOC resin was excavated in 1990 after 25 years of service, re-certified and buried again for continued service.

- AOC has the optimum cost-effective resin to protect against attack from acids, alkalis, bleaches, caustics, salts, bases, solvents and hydrocarbons. Proven chemistries include isophthalic polyester, bisphenol-A polyester, bisphenol vinyl ester and epoxy novolac vinyl ester. Where required, we also offer food contact, potable water and pharmaceutical grades as well as fire and smoke ratings as high as Class 1 (ASTM E84).

- Composites made with Vipel resins are design-engineered to exacting specifications for cost effectiveness and outstanding performance. Primary reasons for using AOC resin technologies in composite tanks, vessels, pipe and fittings are chemical and corrosion resistance, long-term durability, high strength-to-weight ratio and dimensional and thermal stability.

- Other composite benefits that can be achieved from applications that incorporate AOC resin are dynamic loadbearing properties, freedom of design, unitized construction, electrical and thermal insulating properties, integral color, surface finish options and lower system and life cycle costs.

- Storage tanks and process vessels made with Vipel resins do not need secondary liners, coatings or cathodic protection to resist internal and external corrosive attack. For temperature sensitive applications, the composite's inherent thermal insulating properties eliminate or reduce the need to apply other insulating material.

- Either aboveground or buried, composite pipe and fittings made with Vipel resins resist chemical attack and hydrolysis. Composite pipe's lightweight, its longer lengths and AOC flexibilized resin formulations make installation quicker and easier. The smooth Vipel inner wall improves fluid flow and provides good resistance to abrasion from suspended solids.

- For corrosion-resistant pipe, connections, fittings and similar applications where the medium is a flammable substance, composites offer the added benefit of less regulatory paperwork and delay. Because AOC resin-content composite systems are chemically bonded together, they do not require a "hot work" welding permit.

- Vipel resins for cured-in-place pipe rehabilitation allows municipalities and industrial companies to repair aging underground sewers and piping systems without the cost and disruptions of digging. A new piper liner, often with higher flow capacity, is fabricated inside the existing pipe structure. AOC chemists formulate the resin to the performance provisions of ASTM F1216, the standard for cured-in-place technology. AOC formulations also meet requirements for extended pot life and good processability.

- AOC combines its superior resin chemistry with the chemistry of people dedicated to providing material solutions for storage tanks and piping. At the vanguard of our corrosion strategy are regional Corrosion Specialists who assist in the specification, fabrication and installation of corrosion resistant equipment. Contact your regional Corrosion Specialist to realize the chemistry of Vipel technology – and the chemistry of the AOC Corrosion Team.

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950 HIGHWAY 57 EAST
COLLIERVILLE, TN 38017

PHONE (800) 238-7536
FAX (901) 854-7277

www.aoc-resins.com

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