

Vipel® Corrosion-Resistant Resins for Composite Equipment and Systems for the Pulp & Paper Industry

- Fiber-reinforced polymer (FRP) composites made with Vipel® resins resist the aggressive environments of pulp and paper processing. Composites made with AOC resins are durable, cost-effective alternatives to carbon steel, stainless steel, aluminum, exotic alloys, concrete and wood. Vipel technologies eliminate the need for coatings, ongoing maintenance and frequent replacement.
- AOC has the optimum cost-effective resin to protect against attack from chlorine, chlorine dioxide and other industry process chemicals. Proven chemistries for municipal and industry wastewater include isophthalic polyester, bisphenol-A polyester, bisphenol vinyl ester, epoxy novolac vinyl ester and, where required, 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 composites for pulp and paper processing 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 pulp and paper 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.



- Bleach towers and upflow tubes can rely on Vipel resin technologies to provide years of reliable service. High performance epoxy novolac and bisphenol vinyl esters provide superior resistance to caustic and chlorine environments at elevated temperatures.

- AOC has Vipel resins to resist the hot, wet and acidic conditions of scrubbers, ducts, stacks and liners used in pulp and paper mills. Within the AOC corrosion product line are time-proven resins for a variety of conditions, including chlorinated systems and continuous moisture.
- Domes, enclosures, hoods and covers fabricated with Vipel resins contain odors and fluids, maintain treatment conditions and resist attack from moist, corrosive environments. A high strength-to-weight ratio results in large composite structures that are easier to ship and install than heavier alternatives. Design freedom allows for large curved expanses stiffened with integral ribbing and shaped to be nested during shipping.
- Composite building panels, walls, roofing and ceilings that incorporate Vipel resins will not decay like metals, wood and masonry in the aggressive pulp and paper mill environment. Inherent color eliminates painting and reduces maintenance and replacement costs. Class 1 flame and smoke ratings are available.
- AOC resins provide inherent corrosion resistance for composite grating, handrails, stairtreads, platforms, ladders and protective cages. Rust-free qualities eliminate the need for protective coatings and ongoing maintenance. Painting is eliminated because color is integrally imparted during the fabrication process. Foot traffic applications are manufactured with slip and skid resistant features, and high dielectrics provide added protection when working near power sources.
- Vipel resins for cured-in-place pipe rehabilitation allows pulp and paper manufacturing facilities to repair aging

underground sewers and piping systems without the cost and disruption of digging. A new piper line, often with higher flow capacity, is fabricated inside the existing pipe structure.

- Other composite pulp and paper applications that benefit from AOC resins include:

- Storage tanks
- Process Vessels
- Pipe & fittings
- Coatings & Liners
- Aeration Equipment
- Enclosures
- Structural profiles
- Recovery tanks
- Troughs
- Valves
- Brown stock washers
- Clarifiers

- AOC combines its superior resin chemistry with the chemistry of people dedicated to providing material solutions for wastewater treatment. 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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