



# AquaBlok®

Composite Particle System

## TECHNICAL SUPPORT/ENGINEERED SOLUTIONS

At AquaBlok we have the expertise to help you engineer the right solution to meet the special challenges of your project. The company has performed both on-site studies and lab column testing to characterize and test various product and/or treatment material applications for a particular site. Services include:

- Project-Specific Bench Scale/Field Testing & Analysis
- Pilot Application Technical Assistance
- On-Site Observation And Application Assistance Including Oa/Qc

## ON-SITE INSTALLATION SUPPORT

AquaBlok works with most standard installation methods. We can package and transport AquaBlok in the configuration that best meets your project needs. AquaBlok offers convenient packaging for easy unloading and placement. We offer flexible transportation arrangements to meet your specific project needs. AquaBlok works with common installation methods:

- Excavator
- Conveyor
- Stone Slinger
- Clamshell Barge
- Helicopter

## FLEXIBLE PACKAGING & SHIPPING OPTIONS

AquaBlok packaging and delivery methods are designed to maximize efficiency. AquaBlok can be shipped to your site in easy-to-handle, cost-effective packaging for efficient application to the target area. We can meet your specifications for project volume and preferred delivery method. For very large product volumes we can manufacture product on-site, which reduces costs for transportation and packaging. AquaBlok is available in the following standard packaging sizes:

50 LB. PAILS/BAGS — 1.5-TON SUPERSACKS — 20-TON BLADDER BAGS — ON-SITE PRODUCTION



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## PROVEN TECHNOLOGY FOR BOTH: CONTAINMENT AND TREATMENT OF CONTAMINATION

## + SEALING IN A WIDE RANGE OF GEOTECHNICAL APPLICATIONS

## AQUABLOK ENVIRONMENTAL+GEOTECHNICAL SOLUTIONS

AquaBlok® is a patented material based on a composite-aggregate technology resembling small stones. It is comprised of a dense core, clay or other amendment coating material (the active layer), and polymers. The selection of coating material is based on the application that is being targeted. The use of a bentonite coating layer provides a highly impermeable sealant layer that can be used in sediment remediation and a wide range of upland and aquatic sealing applications.

## ENVIRONMENTAL REMEDIATION SOLUTIONS

Includes contaminant sequestration and treatment in a broad range of settings, particularly subaqueous sediments. Other focus areas include addressing nutrient bioavailability and ecological restoration.

## GEOTECHNICAL SOLUTIONS/SEALING

Includes seepage reduction and low permeability/containment alternatives in a wide variety of circumstances and settings — ponds, dams, streams, wetlands, manholes, trench dams and wells.

SIMPLE DESIGN, GREAT BENEFITS: AGGREGATE CORE + COATING = AQUABLOK/AQUAGATE+ COMPOSITE PARTICLE





## ENVIRONMENTAL REMEDIATION SOLUTIONS



AquaBlok forms a low-permeability isolation barrier, while AquaGate+ delivers permeable, in-situ chemical & biological treatment materials.

AquaBlok and AquaGate+ are two distinctly different composite material solutions that have been applied successfully in the United States and key locations around the globe. AquaGate delivers amendments in a thin coating around an inner core, allowing movement of water through the matrix for treatment, while limiting the migration of contaminants. Sites where AquaBlok and AquaGate+ materials have been applied have been monitored and studied extensively, including an in-depth evaluation by the U.S. EPA (Superfund Innovation Technology Evaluation).

### AquaGate+ Benefits:

- Uniform delivery through a water column
- Minimal material separation or loss of high-value, low concentration amendments
- Creates uniform layers with less material; field mixing or blending not required
- Installation support; in-house technical support
- Custom-formulated to your specifications

AquaGate+ (AMENDMENTS)			
ORGANOCLAY	EHC-M™	CLINOPTILOLITE	MICROBES
POWDER ACTIVATED CARBON (PAC)	SULFUR COMPOUNDS	ORGANIC CARBON	
ZERO VALENT IRON (ZVI)	ALUMINUM SULFATE	SORBSTER™	

APPLICATIONS:	AquaBlok	AquaGate+
MGP SITES (COAL TAR)	⊙	⊙
REFINERY SITE (PAH, DIESEL)	⊙	⊙
RIVERINE (PCBS, DIOXIN, PAH)	⊙	⊙
POND (METALS, MERCURY)	⊙	-
UPLAND SEEP ZONE (ARSENIC)	⊙	⊙
INSTALLATION CONFIGURATIONS:		
LOW PERMEABILITY CAP	⊙	-
CUT-OFF WALL	⊙	-
UPLAND PRB	⊙	⊙
LANDFILL CAP REPAIR	⊙	-
FUNNEL & GATE	⊙	⊙
POST-DREDGE BACKFILL	⊙	⊙
IN-SITU TREATMENT	-	⊙
REACTIVE CAPPING	-	⊙
BANK STABILIZATION, RESIDUAL SEQUESTRATION	⊙	-

AquaGate+

## GEOTECHNICAL SOLUTIONS+SEALING



AquaBlok sealing and delivery system technology can be successfully applied to a wide range of geotechnical applications.

Bentonite is well known for its sealing capability, and our patented bentonite-coated aggregate materials provide a more effective application of this proven sealing material. Our engineered bentonite creates a low hydraulic conductivity and high solids seal that resists erosion and fully hydrates within 24 hours. The superior qualities of AquaBlok have proven to exceed alternative options in results, convenience and ease of implementation—all of which result in lower project costs.

### Key Benefits/Technical Advantages

- Efficient delivery of high-value sodium bentonite at relatively low concentrations
- Improved uniformity and reliable seal in inches rather than feet
- No field mixing or blending
- Low cost handling & installation

AquaBlok (APPLICATIONS)		
POND CONSTRUCTION	FLOOD MITIGATION	WELL SEALANT & GROUT
DAM/LEEVE CONSTRUCTION	STRUCTURAL BEDDING	WETLAND RESTORATION
ANTI-SEEP COLLARS, TRENCH DAMS	SLOPE STABILIZATION	FML PATCHING
TEMPORARY & DIVERSION DAMS	LANDFILL LINER	KARST/SINKHOLES

### Annular Sealants

**HoleBlok** & **HoleBlok+**™ are bentonite-coated composite particles that perform better than traditional bentonite pellets at a lower price. HoleBlok+ is the first annular sealant material to include reactive amendments to address sorption and chemical “rebound” or “draw-down” effects in monitoring wells as can occur with the use of typical coated bentonite pellets.

### Wetland Restoration

SubmerSeed® is an alternative to traditional means of plant propagation in wetland/aquatic settings with significant advantages over seed or plugs in many scenarios. The typical formulation of dry product relies on the nutrients available in the surrounding water and underlying sediment to support germination and nourish sustained growth. Fertilizer-amended product formulations can also be provided.

