

PAMs, Polymers, and Ponds

Information on using Floc Logs for Water Clarification

What is PAM?

Polyacrylamide or PAM is a large family of chemicals based on chains of acrylamide units. Depending on their exact make-up, these polymers can be anionic (negatively charged), cationic (positively charged) or neutral. There are hundreds of different types of PAMs used for a wide variety of purposes in many industries including agriculture, water treatment, and paper-making.

The positively charged (cationic) polymers should be used with care, and never where there is a potential for release into the open environment. The cationic polymers are highly toxic to fish and aquatic organisms as they can bind directly to the respiratory membranes on the gill surface causing suffocation. Only the anionic or negatively charged polymer types should be used for erosion control or water clarification where there is discharge into the open environment.

What are the Floc Logs?

The Floc Logs are a group of soil-specific log-blocks that contain blends of water treatment components and anionic polyacrylamide, used for water clarification and erosion control. There are more than 80 different types of Floc Logs, each tailored for a specific soil or water chemistry to provide optimum performance.

A water sample from your pond should be sent to Applied Polymer Systems or your local distributor for testing to find the right Floc Log for your water chemistry and application.

I have fish in my pond; will the Floc Logs hurt them?

No. Though like any potential chemical you introduce into the environment, you should be aware of what they are and the manufacturer recommended application rates. Ask for toxicity reports to be provided to allow you to make an informed decision.

All the Floc Logs meet ANSI/NSF Standard 60 Drinking Water Treatment Chemical Additive classification. Extensive toxicity testing has been conducted on each type of Floc Log, following EPA test protocol and ASTM guidelines, to ensure they are non-toxic and safe to use anywhere.

The high performance standard and lack of toxicity has meant that many state agencies have used Floc Logs where optimum performance is necessary and in areas of ecological sensitivity.

How do the Floc Logs work?

The Floc Logs are designed for placement in flowing conditions, anywhere there is turbid water. The log will slowly dissolve over time, like soap on a rope, and release the polymers into the flowing water. The polymers and additives will react with suspended sediment causing the particles to bind together.

The Floc Logs should be placed where the dirty water will flow over them; in ditches that feed a pond or lake, at the intake or outlet of a recirculation system, or near the aeration system. Applied Polymer Systems and its distributors can help you fit the use of Floc Logs into your existing pond system to ensure you get optimum performance.

How do they clean my pond?

The Floc Logs can bind together colloidal clays and other suspended sediments that can discolor a pond. The sediment is bound into larger particulate that will settle out of water column quickly and resist re-suspension. The use of particle curtains or filters can help collect the particulate that forms and remove it from the water faster.

How long will it take for my pond to become clean?

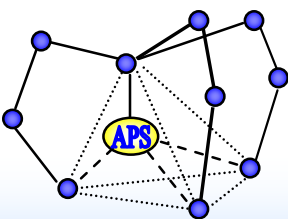
That depends on the size of the pond, the specific water chemistry, and the movement rate of the water. If the pond is small with a fast turnover rate the pond may be clarified after only a few turnover cycles. If the pond or lake is very large with a slow turnover it may take many turnover cycles before the water becomes clarified. The types of clays and other suspended material in the water can also affect how quickly the particles can form and drop out of suspension.

What else can the Floc Logs do?

The Floc Logs can also remove dissolved metals, phosphorous, nutrients and algae from the water column. They can decrease harmful algae blooms and bacteria by removing the clay particles that provide the surfaces they attach to and grow on. The Floc Logs can bind phosphorous and limit its availability to plants, helping reduce the growth of water weeds.

Where can I get more information?

For more information contact Applied Polymer Systems or your local distributor:



Applied Polymer Systems

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