



EUCLID CHEMICAL

CHEMICAL GROUTING

SOLUTIONS



DURAL AQUA-DAM

DURAL AQUA-DAM LV

DURAL AQUA-DAM 100

DURAL AQUA-DAM 200F

DURAL AQUA-FIL

DURAL MUD LOCK

DURAL AQUA-DAM

STOPPING WATER IN ITS TRACKS



For decades, chemical grouts have been the solution for sealing leaking cracks and fractures within sound substrates and the stabilization of unsound earthen materials.

These substrates can vary from 4" (10cm) thick concrete, vast amounts of natural stone, to tons of loose soil in an excavated embankment. In all instances, water is present, which creates problems for the owner. To stop the infiltration of the water, a decision must be made on whether to use the water present as part of the solution, or to just move the water out of the problem area. In either case, chemical grouts, primarily based on urethane technology, are injected or placed to serve as the remedy.

These single and dual component urethane-based grouts solve problematic leaks in otherwise sound substrates, as well as solidify unstable earthen mounds and embankments. Once cured, these grouts create a foam or gel that seals cracks, joints, and other pathways, preventing any further water leakage. **All the products in the DURAL Aqua line have USDA approval.**

DURAL Aqua-Dam is the backbone of the line. This hydrophobic grout will solve the majority of leaking problems in construction today.

Prior to use, DURAL Aqua-Dam is mixed with an accelerator (DURAL Aquaccelerator) to control the reaction time of the grout. Once injected, DURAL Aqua-Dam reacts with the moisture present to form a rigid foam that shuts down the penetration of water through the opening. After the grout has cured, it will retain its form and continue to perform, even if the source of water has gone dormant. In the event the water should return, the DURAL Aqua-Dam will be ready to stop water in its tracks.

APPLICATIONS

DURAL Aqua-Dam is ideal for sealing leaking cracks & joints in wet, damp or below grade environments such as:

- Water & wastewater treatment facilities
- Failed waterstops
- Sewers & manholes
- Below grade walls subject to high water tables
- Concrete & earthen dams

MEASURABLE BENEFITS OF DURAL AQUA-DAM

Controllable Reaction Time: The use of Dural Aquaccelerator at different ratios controls the speed of the reaction time for specific applications.

Flexible Use: Bonds to wet and dry substrates and needs very little water to react and cure.

Long-Term Solution: Excellent elongation to handle moving cracks and joints and remains active when the water subsides.

Packaging to Suit Any Application: Both single and dual cartridge products are available to provide the ideal solution for any application.



HYDROPHOBIC VS. HYDROPHILIC GROUTS

Urethane based chemical grouts are separated into two categories, hydrophobic and hydrophilic. While both types of grouts will work well to stop the invading water, each has their own attributes which makes them the right selection for your next project. Regardless of the type of chemical grout used on the project, the application means and methods are relatively the same. The key to successful chemical grouting is delivering the material to the point where water is invading the substrate and closing down that point of entry.

HYDROPHOBIC GROUTS

Simply translated as a “water fearing” material, hydrophobic grouts have little to no affinity for water. These grouts need very little, if any, water to react and cure. Once cured, hydrophobic grouts resemble a rigid foam, containing an open cell structure (see photo below). These grouts are typically supplied as a single component material with an available accelerator. However, more dual component grouts are appearing on the market, which have a very short reaction time and quickly transform from a liquid to their final rigid foam form. As hydrophobic grouts expand and cure, they repel water and push it further back into the substrate and into the micro-cracks and fissures that extend from the main crack. Hydrophobic grouts are not able to absorb water in their reaction, they fail to displace the water in micro-cracks and fissures, thus they are unable to establish a strong mechanical bond to the interior walls of a crack. These grouts retain their shape and size once cured. Dry spells within the substrate won’t affect the material. The cured grout can only be displaced if the crack, joint, or substrate is compressed. This will compress the grout and due to its limited bond capability, it won’t be able to expand back into its original size when the surrounding environment expands.

HYDROPHILIC GROUTS

At the other side of the chemical grouting spectrum are hydrophilic or “water loving” materials. Hydrophilic grouts thrive on water and seek it out. This type of grout cures to a flexible foam or gel (see photo). During their curing process, hydrophilic grouts absorb and retain water molecules. This process allows them to expand into and replace the water that may be lurking in the finer cracks and fissures that extend from the main crack being treated. This is the key attribute that makes hydrophilic grouts preferred over the hydrophobic type in situations where movement along the crack is expected. A tenacious mechanical bond is created within the dynamic crack due to the grout’s ability to lock itself into the crack. As the crack goes through expansion and contraction cycles, the hydrophilic grouts easily move with it. Hydrophilic grouts need to constantly be in the presence of water. Long dry periods will cause the grout to dehydrate and shrink, creating the possibility of leakage through the treated area. Mining & tunneling projects are prime applications for the hydrophilic type of chemical grout. Other applications include below grade walls where a high water table exists and the repair of faulty or poorly installed PVC and expandable bentonite water-stops.

HYDROPHOBIC GROUTS



A “water fearing” material. Hydrophobic grouts have little to no affinity for water. As they cure, they repel water and push it back into the substrate.

HYDROPHILIC GROUTS



A “water loving” material. Hydrophilic grouts thrive on water and seek it out within the crack and all the tributaries and fissures associated with it. As they cure, they absorb water, replacing it in the substrate.

ADDITIONAL CHEMICAL GROUT PRODUCTS IN THE DURAL AQUA LINE INCLUDE:

DURAL AQUA-DAM LV is a 100 cps version of **DURAL Aqua-Dam**. This super-low-viscosity, hydrophobic grout mixes with Dural Aquaccelerator to create an impenetrable barrier to water in even the smallest of cracks and fissures. It retains its form and function even if the water currently present subsides.

DURAL AQUACCELERATOR is an accelerator (not a catalyst) used with **Aqua-Dam** and **Aqua-Dam LV**. This product is mixed into the grouts to control the foaming & set times. The amount used can vary depending on temperature and the amount of water present.

DURAL AQUA-DAM 100 cartridges are perfect for small applications where bulk material isn't needed, or where pumps can't access. These cartridges fit into a standard sized caulking gun and treat small, seeping cracks. **DURAL Aqua-Dam 100** is the perfect amount of material in an easy to use cartridge that is adequate for most residential projects.

DURAL AQUA-DAM 200F dual cartridges were created for smaller projects where an excessive amount of water is present. This fast foaming/setting formula quickly stops all leaks within a crack and sends the water elsewhere. It is supplied in a 1:1 ratio cartridge that reacts with or without water present in a matter of seconds.

DURAL AQUA-FIL is the only hydrophilic grout in the line. This "water-loving" grout deeply penetrates the finest of cracks and consumes the water living within the crack and all its fissures and tributaries. **DURAL Aqua-Fil** is the perfect choice for the underground market and other areas where a flexible seal is needed in constantly wet environments.

DURAL MUD LOCK solidifies unstable earthen areas. This ultra-low viscosity (50 cps) hydrophobic grout is used to soak into areas of poorly consolidated or compacted earth to create a large, solid and stable mass. Eroding hillsides, cliffs and embankments are prime targets for **DURAL Mud Lock**. This material can also be injected under "rocking" concrete slabs where the sub-base has further compacted or has been washed away.

DURAL PUMP RINSE cleans and primes your equipment prior to the next use. Chemical grout left inside your pump or its lines will surely ruin your investment. **DURAL Pump Rinse** cleans out any remnants of grout and leaves your hoses and pump primed for the next job.



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