aquaBRIGHT® vs. Traditional Pool Finishes

- **Warranty** – The EcoFinish aquaBRIGHT™ Pool Finish warranty is unique to the industry. Other pool finish warranties generally require the pool owner to maintain perfect water chemistry and be able to provide proof of that perfectly maintained water over the life of the finish, or the warranty is null and void. Cementitious finishes will deteriorate from even mildly poor water chemistry, so it is crucial to maintain a balanced pH. aquaBRIGHT™ is a pH neutral surface that can handle the normal variations in pool chemistry without adverse affects to the finish.

  The aquaBRIGHT™ limited Warranty includes the following: Chemical resistance, Chalking resistance, Will inhibit the growth of mildew on the surface, Crack resistance, Spall and delamination resistance, Stain (organic) resistance.

- **pH neutral surface** – Simply put, unlike plaster or other cementitious surface, aquaBRIGHT™ is inert and does not react with the water chemistry. Any chemicals added to the water in a pool finished with aquaBRIGHT™ are adjusting the chemistry of the water, and only the water. Cementitious surfaces are safely sealed from water (chemical) contact below the aquaBRIGHT™ finish. Since no leaching of calcium occurs, the pH is much easier to balance.

  A 1991 scientific research report published by the School of Building Construction at the University of Florida stated "The deterioration of marcite (plaster) has been found to be chemically related and due primarily to leaching of Calcium hydroxide (portlandite) from localized areas of pool plaster. Acidic pool water (pH less than 7.0) can wreak havoc on marcite and pool plumbing, resulting in etching and staining. Proposed solutions to control the damage aggressive water can produce include (1) paying careful attention to water chemistry to avoid unbalanced water conditions and (2) providing a chemically inert barrier between the pool water and the marcite surface."

  In 1991 there was no such barrier solution… Now there's aquaBRIGHT™.

- **Use less chemicals** – Since there is no chemical reaction between the water and the cementitious surfaces causing a constant shift in pH, a pool coated with aquaBRIGHT™ will use less chemicals. Commercial pool owners have reported up to a 40% savings in annual chemical consumption for the same pool now finished with aquaBRIGHT™.

- **Easy Chemistry** – The target chemical balance for a pool finished in aquaBRIGHT™ is basically the same as a vinyl liner pool. Pool owners will find it very easy to maintain the proper pH and chlorine levels as the major cause of pH drift has been eliminated. Even the job of adding chemicals is easier, since now there is no reason to pre-dilute the acid by mixing with water prior to pouring into the pool.

- **Chemical resistant** - aquaBRIGHT™ is manufactured from resin in the same base polymer family as the jugs storing pool chemicals. It is approved for installation in swimming pools and spas heated up to 104° F, and is resistant to blistering, chalking, peeling, cracking, and other of signs of deterioration in normal use. In fact, is so impervious to chemical attack that it is demonstrated by pouring straight Muriatic pool acid directly onto the finish and allowing it to remain for 10 minutes. After washing off there is no visible evidence of the acid having any effect on the surface.

- **Stain resistant** – aquaBRIGHT™ material is manufactured and processed into a fine powder that is applied by the EcoFinish thermal process. As the powder particles pass through the flame, they are heated and softened so that when they strike the pools surface they immediately adhere and flatten out onto the existing pool surface. As the process continues to apply material, the particles melt, flatten out, and join other melted particles to flow together to form a complete layer. There are no pores for algae, calcium, rust, or other staining agents to grab or imbed into. Most discoloration that would normally be a permanent stain in a plaster pool should easily brush off of aquaBRIGHT™.

  The worst case of potential staining in EcoFinish history so far occurred due to severe abuse of a winterized pool in the Northeast, and it truly tested the stain resistance of aquaBRIGHT™. The owner purchased a new winter pool cover, but it was delivered and installed in the wrong color. The supplier sent a person to install a different cover after several months of the existing cover collecting rain water, leaves and other debris. The person doing the installation did not pump out and clean the debris from the existing cover, but rather just slid the cover off and let all the biological soup sitting on top drop into the pool water. He then installed the new cover and the pool remained winterized for the next three months. When it was opened in the spring, the pool was found to be full of a nasty brown mess so thick that the bottom was not visible. After three days of work to clear the water, it became apparent that the entire aquaBRIGHT surface from the waterline down had a brown tinge that brushing would not remove. EcoFinish advised the use of Ascorbic Acid powder (vitamin C) poured down the walls. Within just a few minutes the aquaBRIGHT™ finish was clean and back to its original brilliant appearance throughout the pool.

- **Crack Resistance** - aquaBRIGHT™ pool finish is an incredibly strong, yet very flexible polymeric material. The material will stretch 200% before it ruptures or tears. It remains flexible, although at a lesser degree, even at very cold temperatures. Results of testing conducted over a Canadian winter in Ontario, with temperatures reaching 40 degrees below zero showed no detrimental effects to the aquaBRIGHT™ finish applied to two steel pool wall panels that were bolted together. No cracking was observed, even over the joined seam of the panels.

  During installation, small craze cracks in an existing pool finish will be covered by the aquaBRIGHT™ finish. Larger cracks, including structural cracking are repaired by industry accepted methods such as epoxy injection, hydraulic cement, and/or staples, and then coated over during the normal aquaBRIGHT™ installation. Due to the flexibility of the finish, minor cracks which may continue to form should remain hidden below as the aquaBRIGHT™ stretches over the top. Cracks that do appear through aquaBRIGHT™ represent potentially serious structural issues, and may require that major repairs be completed on the pool. However, it will be much easier to repair and match aquaBRIGHT™ following the repairs than other finishes.

- **Color Uniformity** – The aquaBRIGHT™ installation process yields a very uniform color and pattern over the entire interior surface of the pool. The final appearance of the finish following installation is how is will look for many years to come. Even the darkest colors of aquaBRIGHT™ should not mottle or noticeably change color over time. Unlike cementitious materials with dyes added during mixing prior to installation, aquaBRIGHT™ pigments are encapsulated in the polymer resin during the manufacturing process, and therefore cannot react with the pool chemistry. Dyes that give plaster and other cementious finishes their color are continuously exposed to pool water chemistry on and below the surface, and the result can be a non-uniform color change that appears as patches or blotches of bleached out color. This is called mottling, and usually occurs over time, but has also become apparent almost immediately following the new finish start-up process. It is generally more prevalent and easier to distinguish with the darker dyed finishes.

- **Scale Resistance** – Scale build-up on a pool's surface is usually attributed to two factors; free calcium suspended in the water which attaches itself to the pool finish, or calcium leaching down onto the pool finish from water or rock features above the waterline. Water chemistry again plays a critical role in scaling due to free calcium, as a high pH will actually cause the free calcium to become chemically attracted to the cementitious finish. Regardless of the method of build-up, once deposited onto a cementitious finish the scale becomes chemically and physically bonded with the surface. Since the scale and the finish are both calcium based, they join and become one. Removal of the scale is only accomplished by acid washing the pool to chemically burn the calcium from the surface, which also removes some of the finish as well. Care must be taken not to over expose the finish to the acid, or too much of the finish will be removed leaving a rough gritty feeling surface.

  The aquaBRIGHT™ surface is neither chemically attractive to calcium, nor does it present a porous physical surface onto which calcium can adhere. Calcium that may have leached down onto the surface from a water feature is not well adhered, and can either be picked off, or removed using a "stain erasure" on the end of a brush handle.

- **Chip, Flake, Peel, Chalk Resistance** - aquaBRIGHT™ is manufactured using a polymeric resin that is engineered to withstand exterior exposure for many years without any breakdown in chemical structure. Unlike vinyl and fiberglass materials, the base polymer family has been used for decades to provide outstanding performance in exterior applications where the other materials eventually show signs of degradation. Because it remains a soft, flexible material throughout is life, it is extremely resistant to chipping, flaking and peeling and should remain a single cohesive polymeric layer that remains well bonded to the pool surface.

- **Fade Resistance** – In addition to using only exterior grade colored pigments, aquaBRIGHT™ is formulated to provide outstanding U.V. protection and color stability. Real world pool environment testing ranging from the frozen north to very hot desert climates has shown the aquaBRIGHT™ finish to be extremely fade resistant over time. Additionally, outstanding results from long duration QUV Accelerated Weathering Testing confirms the ability of aquaBRIGHT™ to withstand the affects of exposure to U.V. sunlight. We are confident that an aquaBRIGHT™ color finish applied to a pool's surface should look vibrant and colorful for many years to come.

- **Soft and easy on the feet** – aquaBRIGHT™ was intentionally engineered to be a soft feeling material. The surface can best be described as an "orange peel" texture, which provides for a pleasant feel for swimmer's feet. Cementitious finishes such as plaster and quartz may begin as smooth finishes, but will degrade over time into rough finishes that can be very abrasive on feet. Pebble finishes, even polished stone versions are never really easy on the feet due to their bumpy surface.

- **Slip Resistance** – All current use pool surfaces are naturally slip resistant, with the exception of fiberglass, which tends to feel very slippery, especially on sloped depth transitions. aquaBRIGHT™ pool finish, with its orange peel surface is inherently slip resistant as normally applied for pool surfaces. On step treads, bench tops, and beach entries the finish can be applied is such a way to increase that slip resistance to very safe levels. Following an application at a SeaWorld water park facility, the finish was tested by SeaWorld Health, Safety, and Environmental Engineering to determine if the slip resistance (coefficient of friction) met their standard. Utilizing specialized equipment, the finish was tested in the wet condition with the minimum acceptable slip resistance being equal to that of a wet concrete surface. aquaBRIGHT™ was measured to be two full points (on their standard scale) over the minimum standard, and was deemed to be very safe for their patrons.

- **Outstanding Adhesion** – Cementitious pool finishes do not provide an impermeable, waterproof surface, and for all the unbalanced water chemistry reasons previously discussed may degrade not only on the surface but also on its interior. Over time, delamination within a plaster surface can begin to form so that instead of one thick layer as it was originally applied, the layer has split into two layers one on the other. Water begins to fill this layer, and forms "hollow spots". These may be seen as bulges in the pools surface as they begin, but left unrepaired, will eventually break out the top layer of plaster leaving a distinct missing plaster area on the pool surface. Pebble finishes have a much lower risk of this type of delamination, but as the pebbles are adhered to the surface in a cementitious mortar matrix, it too is subject to poor water chemistry degradation. aquaBRIGHT™ is an impermeable, waterproof surface and can provide the barrier required to protect the cementitious base material from degradation due to poor water chemistry. The bond strength of aquaBRIGHT™ to an existing plaster finish has been tested at over 800 psi. And when the surface finally did release, a cone-shaped plug of plaster an inch thick popped out with the aquaBRIGHT™ still attached.

- **New Finish Start Up** – With a new aquaBRIGHT™ finish, there is literally nothing to do except "Balance and Swim". Just fill the pool, balance the water chemistry, and swim in crystal clear water. Pools and spas may even be heated immediately after filling. All other cementitious pool finishes require some type of start up process and wait to heat time period. These range from continuous brushing and backwashing to clear the suspended plaster chalk from the water, to "hot starts" requiring acid washing and chemical additives to expose aggregates and create the desired appearance of the finishes. These start up processes are absolutely critical to the final appearance and longevity of the cementitious finish, and may take a week or more to complete. If they are done improperly, or neglected even to a slight degree, the finish will be affected. Pool builders understand the critical requirements of start up, and may choose to absorb the cost providing a person to perform the labor and monitor the process. Others instruct the pool owner and leave the start up in their care. Regardless of who performs the start up, the final outcome will determine the appearance and longevity of the surface (mottling, bleaching, over/under exposed), and the pool owner still cannot use their completed pool for over a week.

- **Repairable** – Damage happens. Whether it occurs from natural causes or human causes, damage to a pool's surface can happen. These imperfections can range from minor craze cracking, chipping, and abrasions, to delamination, gouges, and structural cracks. Due to the difficulty of repairing a cementitious pool finish, these conditions usually remain unrepaired until it's time for a complete remodel or resurfacing. aquaBRIGHT™ applied over cementitious or fiberglass surfaces will assist with hiding minor imperfections that may develop in the base surfaces. Small cracks can develop and the aquaBRIGHT™ finish should remain intact, hiding these cosmetic imperfections from view. If however, a pool finished with aquaBRIGHT™ were ever to need repair it can easily be accomplished. Minor cosmetic damage is repaired by reheating and melting the material to heal gouges and cuts, and to restore the glossy finish. Major repairs to the pool's underlying shell would only require the aquaBRIGHT™ finish to be cut back approximately two inches around the damaged area being repaired. Followed the structural repair the aquaBRIGHT™ surface is reapplied over the repaired area, and blended with the surrounding finish utilizing EcoFinish equipment.

- **Water Slide Finish** – Although aquaBRIGHT™ in its standard application has a naturally slip resistant property which can be enhanced to provide outstanding slip resistance for steps, it can also be applied to concrete and fiberglass waterslides to create a slippery slide surface. Now waterslides can receive a finish that matches the interior of the pool. Cement water slides require an acrylic sealer or paint to be applied to create the slippery surface which typically only last from one to two years. Fiberglass slides exposed to the sun begin to chalk and become less slippery. aquaBRIGHT™ will retain its color and appearance for many years, and if it were to become less glossy and slippery from all the sliding wear, it can easily be re-glossed or even have additional material added without the need to remove the existing aquaBRIGHT™.

- **Use Above the Waterline** – Unlike cementitious pool finishes, aquaBRIGHT™ may be used on areas above the waterline and remain resistant to cracking or fading. aquaBRIGHT™ is suitable for always wet, sometimes wet, and never wet applications on the pool surfaces and its features. Pool tile can now be eliminated by applying the aquaBRIGHT™ finish up to the coping. Vanishing edges and the backside of vanishing edges can now be finished with aquaBRIGHT™ to provide a matching finish throughout. Exposed bond beams that are never wet are also candidates for a matching aquaBRIGHT™ surface.

- **Choice of Colors** - aquaBRIGHT™ comes in eleven different colors ranging from commercial pool white tones to very dark blues and blacks. All aquaBRIGHT™ colors are a blend of different colors that create speckled finishes in variations of white, brown, blue or grey/black tones that resemble a granite surface when applied. EcoFinish responds to customer requests with new color offering, such as the spring 2014 launch of our two newest colors Midnight Blue and Perle Noire

- **Custom Colors** – Cementitious pool finishes may be varied with dyes to change the entire surface color of the pool, for only that one color. Pebble finishes can utilize different naturally occurring colors of pebbles to create subtle, more subdued shade variations of the pool finish. With EcoFinish's custom color service you can now have aquaBRIGHT™ made to your order in virtually any color you desire. Just as with interior design choices where material pattern colors are intentionally highlighted throughout a room, now pool designers can choose to accentuate a color or colors in the design scheme for the entire pool, its features, and the surrounding hardscape. Custom colors are available as custom blends with a specifically varied shade/tone, and all the way to wild solid colors found in waterparks and kid's splash pads. Colors may be matched from a physical sample, a color swatch, or RAL color code provided by the customer.

- **Eco Friendly Finish** – EcoFinish aquaBRIGHT™ Pool Finish has many attributes that make it a Green, Eco Friendly product:
    1. It requires less energy resources to manufacture as compared to cementitious materials.
    2. It requires less energy resources to transport than cementitious materials. A typical pool requires around 100 lbs of aquaBRIGHT™ material to be shipped, not tonnage as with cementitious finishes.
    3. It requires far less energy resources to install the finish.
    4. It will outlast the cementitious finishes and will therefore reduce/eliminate the energy expenditure to remove the old finish, manufacture new material, and install a replacement cementitious finish several times over the life of the pool.
    5. It requires fewer chemicals over the life of the pool to maintain balanced water chemistry, thereby requiring fewer chemicals to be manufactured, and reducing the chemical exposure of the customer's backyard.
    6. It completely seals the pool interior, reducing water loss experienced through cracked cementitious finishes.
    7. Although EcoFinish does not incorporate recycled materials into the aquaBRIGHT™ product due to strict manufacturing purity requirements, the aquaBRIGHT™ material is considered recyclable should it ever be physically removed from the pool.
    8. Stored properly, aquaBRIGHT™ powder has an indefinite useful lifetime, and should never require disposing to a landfill.
    9. There is no end-of-job leftover waste to be disposed in landfills, as is with every cementitious finish which can be as much as hundreds of pounds.