



Description

PolishedScapes® is a formulated pool finish system which utilizes naturally occurring marble aggregates, specialty glass aggregates, high quality iron oxide pigments, pozzolanic rheology cement modifiers and white Portland cement to create a pool finish that is stunningly beautiful to see and touch. PolishedScapes is unique in the fact that it can be polished a number of times throughout its service life to bring back its brilliance and feel. PolishedScapes is ideal for both commercial and residential installations due to its strength, integrity, smooth texture, color palette, and overall aesthetic appeal. PolishedScapes includes Azteca cement modifier to achieve the highest compressive strength as well as a more tenacious bond with the substrate as well as higher resistance to degradation by chemical imbalance or abuse.

Benefits

Strength, Durability, Longevity, Etch Resistance, Ease of Maintenance, Wide Range Color Palette, Custom Colors Available, Polished, POOLCORP Supported, 10 Year Standard Warranty

Color Lightness Analysis Test

NPT Brand	NPT Color	Dry				Munsell Value *	Wet				Munsell Value *
		CIE Values			LRV		CIE Values			LRV	
		L*	a*	b*			L*	a*	b*		
PolishedScapes	Surfside	82.4	-1.1	-1.1	61.1	8.11	70.9	-1.3	1.2	42.1	6.93
PolishedScapes	Breakwater	73.4	-6.6	-8.1	45.8	7.18	56.0	-9.5	-11.5	23.9	5.43
PolishedScapes	Sea Glass	77.6	-9.5	-4.2	52.5	7.61	63.2	-14.3	-5.6	31.8	6.15
PolishedScapes	Summer Breeze	73.2	-0.3	-1.4	45.5	7.17	54.7	-0.1	-1.5	22.6	5.30
PolishedScapes	Cascade	66.8	-4.9	-7.2	36.4	6.51	47.6	-6.1	-9.2	16.5	4.62
PolishedScapes	Skipping Rock	55.8	-0.6	-2.9	23.7	5.41	36.3	-0.5	-2.8	9.2	3.53
PolishedScapes	Silver Spring	62.8	-1.3	-3.8	31.4	6.11	43.7	-1.3	-4.1	13.7	4.24
PolishedScapes	Coral Reef	72.9	2.1	6.4	45.0	7.13	57.9	3.5	11.1	25.8	5.62

Test Lab :

Avian Rochester • P.O. Box 1210 • Webster, NY 14580
 Test Performed August 9th, 2017

Test Method :

British Standard 8493 Light reflectance value (LRV) of a surface.
 CIE Publication 15.2004 Colorimetry
 Gretag Macbeth Coloreye 7000A, Serial Number: 37109171099
 Hemispherical spectrophotometer

Test Procedure Notes :

These measurements were performed on a recently-standardized GretagMacbeth Coloreye 7000A spectrophotometer. This instrument reports hemispherical radiance factor, using diffuse illumination and 8° detection, specular component included (CIE 15.2004 designation di:8°) LRV is calculated from spectral radiance factor using accepted means defined in CIE Publication 15.2004 and British Standard 8493.



Test Data

Dynamic Coefficient of Friction(DCOF) Test Results

DCOF	Color	NPT® Brand	Pool Finish Type
0.7	Surfside	PolishedScapes®	Polished Aggregate
0.69*	Surfside	PolishedScapes®	Polished Aggregate

* Average of three measurements

Test Lab :

Tile Council of North America, Inc. • 100 Clemson Research Blvd. • Anderson, SC 29625

Test Performed August 9th, 2017

Test Method :

ANSI A137.1-2012 Section 9.6.1: “Wet Dynamic Coefficient of Friction (DCOF)”

Test Procedure Notes :

- Samples cleaned with Renovator #120 prior to testing
- Three (3) pool finish samples were tested in all four directions with 10” long measurements
- The SBR sensor was verified using a standard prior to testing.
- Testing was performed under wet conditions using 0.05% SLS water
- Testing was conducted under laboratory conditions at approximately 70°F & 50% relative humidity
- Tested using a calibrated BOT 3000E device.

Azteca | NPT® Modifier :

Azteca is unique blend of pozzolanic and rheology modifiers that is designed to be used in all types of pool finishes. Azteca reacts with the calcium hydroxide, formed when mixing white Portland cement with water, and converts this soluble compound into a beneficial material, calcium silicate hydrate. In essence it takes the negative by-product of cement hydration, (aka calcium hydroxide) and turns it into a supplemental cementitious compound which leads to a more efficient consolidation of material, and densifies the finish while at the same time dramatically cutting down on the amount of efflorescence it produces.

Benefits:

Increased Strength | Durability | Uniformity | Cohesion | Workability

Workability:

Facilitates Pumping | Placement | Consolidation | Troweling of all pool finish material



Preparation

PolishedScapes® should be applied to a sound surface free of oil, dirt, algae or any other foreign substance. Previously applied paints or sealers must be removed by acid washing and/or sandblasting. Neutralize acid with baking soda or soda ash then thoroughly rinse with water. In addition to, or in partial replacement of the procedures mentioned above, MIRACOTE BC PRO, PERMAKOTE™ or SCTRACH KOTE 2000™ can be used as a bonding coat. Refinished pools must be undercut an appropriate distance around all tile, return lines, light fixtures and main drains. All weepers and plumbing leaks should be repaired with water stop cement at least 24 hours prior to plaster application. Failure to properly clean the pool shell prior to application of the **PolishedScapes®** finish may result in an improper bond which can lead to delamination or bond failure.

Mixing

Using a standard plaster mixer, begin by adding enough clean, potable water to wet (1) bag of base mix. This creates an abrasive mix that will break up the additives and pigments. ADD pigment now if the batch formula calls for it. Once the additives and pigments are mixed thoroughly, ADD 2/3rd of the remaining water which should be 18-20 gallons total. Based on Abram's law of water to cement ratio, the correct amount of water under optimal conditions for **PolishedScapes** is 26-28 gallons per batch. It is recommended not to exceed 33 gallons of water per batch. (Local environmental conditions may dictate changes to the standard water to cement ratios.) Less water is better and creates a stronger pool finish. Adding too much water will weaken the plaster matrix and can lead to check (spider) cracking as well. ADD cement and then ADD remaining bags of aggregate. Mix will appear stiff with aids in the mixing and blending of the material and helps break up any clumps. Continue to mix for 2-3 minutes (6-8 minutes total mixing time). Note: most popular paddle mixer is 12 Cubic feet and has a 1,300 – 1,400 pound material capacity. If Calcium Chloride needs to be used, follow industry standards of no more than 2% of total cement weight per batch. (Especially if using pigments, excess Calcium Chloride can affect the quality of the pigments.) **PolishedScapes** has 495 lbs of cement per batch. Based on this formula, you should not use more than 10 pounds for every **PolishedScapes** color. A standard DE Scoop holds approximately 3 pounds of Calcium Chloride as a point of reference.

Pumping

If pumping material to the pool using a plaster pump, please consider the following tips to help maximize the effectiveness of the pump.

1. Set the plaster pump to the lowest gear/shortest stroke by moving the belt.
2. Always begin pumping with a full stroke.
3. Mix (1) bag of EZ Spred in a (5) gallon bucket of water and pump this slurry mixture through the plaster hose right before pumping the **PolishedScapes®** material. This greatly reduces the chances of plugging a hose and or pump manifold.
4. The shorter the length of the plaster hose used to deliver the material, the better.

Application

Mist pool shell prior to application and throughout the process to keep it moist and prevent excessive absorption moisture in the **PolishedScapes®** material as it is being applied. A hot/dry pool shell will cause rapid loss of moisture, accelerated set time of plaster, and possible failure of material adhering to surface. Apply **PolishedScapes®** evenly 3/8" to 1/2" thick. Material that is too thin will dry too quickly, and material that is too thick will take longer to set and can trap moisture (*hydration/graying of finish*). Hard Troweling is essential to a beautiful and long lasting **PolishedScapes®** finish. Hard Troweling is the process of compacting the material so that there is proper compression of the material which drives the larger aggregates down and the smaller aggregates up. Hard troweling also reduces the amount of water in the mixture by bringing it to the surface along with the cement paste mixture. During the application of **PolishedScapes®**, it is recommended to rinse off the excess cement paste and hard trowel/compress the material a minimum of (2) times. After each rinsing phase, the finisher will hard trowel repeatedly to compact the material as tightly as possible. Working the material thoroughly will give the pool finish a very smooth and uniform appearance. Fill all spike holes with aggregate and cement, not just cream.



Exposure

Proper exposure of the **PolishedScapes®** pool finish can be achieved by using a combination of the following procedures with the ultimate goal being a pool finish surface that closely matches the **PolishedScapes®** sample provided. The best looking **PolishedScapes®** pool finishes are achieved by following the exposure steps outlined below:

1. Thorough out the application of the **PolishedScapes®** pool finish it is imperative that the material be hard troweled repeatedly. Proper hard troweling will bring the excess cement paste to the surface where it can be easily removed. There are three common methods for removing the cement cream:
 1. Using a clean, wet tile sponge and repeatedly wipe the pool surface down and then rinse the cream off the sponge into a bucket. The water in the bucket will need to be swapped out frequently
 2. The wet cement paste is removed from the trowel repeatedly and put into a bucket or part of an empty material bag which can then be thrown away once the installation is complete. As the material hardens a clean dry terry cloth rag is used to buff or rub off the remaining cream before it dries and hardens.
 3. Lightly brush the surface with a green/soft bristle brush while you rinse it down with water. The cream will need to be pumped out of the pool with the rinse water. During this exposure method it is very important to make sure that the surface stays wet and that they flow of water is strong enough to rinse the cream away but not too strong that it will remove any quartz aggregates.
2. Once the **PolishedScapes®** material has hardened sufficiently (4 hours minimum, the next day is the most common time frame.) it can be Acid Washed. The best acid washes are performed by a (3) man crew, one man dispensing the acid, one man agitating the acid with a broom or brush, and one man keeping everything wet and rinsing the surface down with a hose. Once the acid wash has been performed the pool surfaced should be rough to the touch. That means that the aggregates have been well exposed and the pool finish will look fantastic once it has been polished. Ask your local NPT representative for guidelines on acid washing.

Polishing

3. **PolishedScapes®** is a polished pool finish. Immediately after the acid wash its time to polish the pool finish utilizing a professional polishing tool like the Triton or a weed wacker modified to accept a backer pad and diamond abrasive pad. The Triton is driven by 3,000 P.S.I. pressure washer which allows the tool to deliver 10,-12,000 r.p.m.'s. Pneumatic polishing tools can be used as well. If using a pneumatic tool make sure that the pool surface is constantly being rinsed with water during the polish. If the acid wash was done correctly the polishing tool is grinding the aggregates down to become flush with the cement matrix. Polishing the pozzolan modified cement will take longer. So focus on getting good exposure on the aggregates and the polishing phase is much quicker and it is easier to achieve a great looking **PolishedScapes®** finish. While polishing keep in mind the area of the pool that you are working on and how the swimmers will come in contact with the pool surface. For example, the deep end of a pool, near the main drain usually doesn't have as much contact time with a swimmer. The steps, swimouts, shallow end of the pool and the entire inside of the spa has much greater swimmer interaction. Many applicators/builders choose to polish the entire pool with a medium grit abrasive like a 70 grit and then go back and focus on the high contact areas with a 120 or even 220 grit abrasive to make the pool finish smooth as possible. The Triton tool can be easily converted to be used while standing as well. Most crews save their used diamond abrasives as they are great for hand polishing inside and outside radii and other vertical to horizontal transitions where the backing pad on the polishing tool do not fit as well. Notes on polishing:
 - **PolishedScapes®** is an exposed glass and marble aggregate pool finish
 - Make sure to wear a long sleeve shirt, as well as ear, eye and mouth protection as some aggregates will be removed and become airborne when using a polishing tool
 - Always wet the surface while polishing (the Triton tool does this for you)
 - Never use an electric/plug-in grinder/polisher as the finish needs to be wet during the polishing and you will be standing in water as you use the tool
 - If you choose to use an air driven polisher than you will need to run a piggy back ¼" tube to supply water to the end of the polisher to keep the pool surface wet
 - Diamond Foam Hand Blocks are available for hand polishing as well
 - Weed Wackers modified to use a backer pad work very well for flat surfaces
 - It is not recommended to use a polishing tool on the outside radii of steps, swimouts and benches as the tool may camfer the edge losing the smooth radius edge.



Note on exposure: Relying completely on an acid wash to expose this finish will typically result in an underexposed pool finish with cement paste (*cement laitance*) covering some of the aggregate. When this happens, the pool surface will not match the sample provided and will ultimately result in lower customer satisfaction. Caution: if this finish is acid washed and not polished it will be extremely rough and dangerous to swimmers.

Cold Weather Considerations

Installing any NPT pool finish if the ambient air temperature is less than 40° Fahrenheit or 4.4° Celsius is not recommended. It is also very important to make sure that the concrete pool shell is not frozen before applying the pool finish. In cold environments, it is very common to enclose or tent the pool or spa to be plastered prior to installation to help control the ambient air temperature and raise the temperature of the pool shell. If portable heaters are used to heat the enclosure, use of a propane heater is recommended as it burns much cleaner than a diesel fuel heater. Make sure that there is adequate ventilation as a buildup of carbon monoxide can be deadly. Carbon monoxide and carbon dioxide build up inside of a pool or spa enclosure can also have detrimental effects on the new pool finish as well: both can lead to excessive carbonation (turning white) of the pool finish surface. When installing NPT pool finishes in cold environments, it is recommended to heat the water going into the mixer to help keep the plaster material from getting cold quickly. According to the American Concrete Institute ACI, "For every 10°F reduction in concrete temperature, setting time is increased by about one-third. For example, a mix that usually sets in six hours when placed at 70°F would not set for 11 hours when placed at 50°F. This delay increases the available time for placing and finishing, but it also extends the bleeding duration, delays slab finishing, and requires longer crew hours." This note can be applied to cold weather pool finish installation as well. Once the new pool finish is installed, it is important that it be kept from freezing for the first 48 hours to ensure that it has enough time to reach a minimum of 500 P.S.I. This will ensure that it will not be negatively impacted by a freeze/thaw cycle as it hydrates. Allowing the finish to freeze within the first 48 hours can dramatically decrease the strength of the pool finish which may result in a shortened service life. Regardless of the how cold the weather gets, it is very important to never exceed 2% of the total weight of cement when using the set accelerator calcium chloride. Using more calcium chloride than what is recommended may have a negative impact on the pool finish, especially on pigmented finishes which will compromise the pool finish appearance and shorten its service life.

Curing

Care should be taken to protect the **PolishedScapes®** pool finish from rapid drying conditions such as high wind, high temperature, or low humidity. Such precautions may include fogging or misting the surface or placing a protective covering over the pool. Cover should not be placed directly on the aggregate surface.

Filling Procedures

When filling the pool, it is important to do so without interruption of fill water. Fill pool as rapidly as possible. Do not allow main hose length to lay on the aggregate surface as it will leave a mark. Use a sock or clean cloth wrapped around the end of the hose, or tie the end of the hose to a small empty water bottle to allow the hose to float in the water as it begins to fill. Always put the hose in the deepest area of the pool, and do not allow fill water to run down from the shallow end of the pool as the path of the running water will leave a mark on the new pool finish. It is very important to ensure that the pool equipment is functioning properly before the pool finish is applied.

Water Chemistry

The pool water must be carefully balanced from the initial fill/start-up and constantly maintained within the guidelines set forth by the NPC. Maintaining proper chemical balance from first fill is essential to maximize the quality, appearance, and lifespan of the **PolishedScapes®** pool finish. Please consult your local NPT Representative concerning proper start-up techniques and maintenance guidelines.



Coverage Rates

Coverage rates vary according to local conditions. The NPC Guideline for coverage rates for polished marble pool finishes is 220-240 square feet at ½" thick for a 1,000 lb batch.

Warnings

This product contains Crystalline Silica. Avoid breathing dust from this product as prolonged and repeated breathing can cause a progressive lung disease called Silicosis. The international agency for research on cancer has classified Crystalline Silica as a known human carcinogen. Long term exposures that result in Silicosis may cause additional health issues. Follow OSHA, MSHA and NOSH health standards for Silica dust. For more detailed information, see the material safety data sheet before using or handling this product. This warning only applies to purchases of products that contain Crystalline Silica. Product is alkaline on contact with water. During mixing or application, avoid contact with eyes or skin. In case of such contact, flood eyes repeatedly with water and call physician. Do not take internally.

PolishedScapes®

PolishedScapes® is a component pool finish which is installed correctly by following a precise formula. Batch Formula Cards are available upon request. Ask your local NPT representative for a set of batch formula cards for all NPT® pool finishes.

PolishedScapes® is an NPT® pool finish brand.

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