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Arcis Thin Prestressed Cast Stone Panels

US Patent No. 6711866

US and International patents pending

General

Arcis panels are much more durable and strong than conventional concrete products due to our proprietary technology and processes. Like other concrete and masonry products, Arcis panels are a cementitious material. Proper care will aid the longevity of the concrete surface.

Staining

Cementitious materials can stain with dirt, oils or other debris. For instance, concrete will absorb the oils from wet wood left on the surface. To minimize staining, keep the surface clean and free of dirt and oils. Concrete sealer will minimize staining by reducing the absorption characteristics of the concrete.

Sealing

We recommend sealing horizontal deck surfaces once a year. Some Arcis products are factory sealed, most are not due to the cure time required by sealer manufacturers. We recommend the use of a 40% siloxane sealer after cleaning and drying. Tamms Barricade 40 or other brands are acceptable, applied following manufacturer's recommendations.

Cleaning Arcis Panels

Arcis panels can have various finishes. **Note that Muratic Acid cleaning products could change the appearance of the finish if the panel has a sandblast or retarded finish.** The following steps should be used sequentially until the desired result is obtained. In any case, try the procedure on a small area in an obscure location. If panels had been sealed, re-sealing is likely required after cleaning.

1. Scrub with hard bristled synthetic brush and rinse with water. Do not use a wire brush, it will cause rust stains over time. A soap solution can be used.
2. Rinse with high-pressure water. Use pressure of up to 3000 psi and a fan tip. Oscillating tips may cause damage to the finish.
3. A dilute 30% bleach solution and brush can be used to remove moss and algae. Thoroughly rinse the surface to remove all bleach residue. Certain colors could be affected by bleach, try a small area. Re-sealing the concrete will be required.
4. Scrub with a hard bristled brush and a citric acid solution such as "Citri Clean". Re-sealing the concrete will be required.
5. Stains not removed with the above procedures require acid washing or blasting. Please contact Arcis if this is required.

Efflorescence

Efflorescence is the appearance of a white chalky substance on the concrete surface which is actually Carbon dioxide. Carbon dioxide is a byproduct of the concrete

hydration process, and can float to the surface with water when the concrete is saturated. If it occurs, follow the described cleaning procedures. Cleaning efflorescence requires that the concrete completely dry after cleaning; and works best on hot sunny days.

Panel storage

Arcis panels are thin and more flexible than conventional concrete products. Panels can be stored vertically or horizontally. Horizontal storage requires level and adequate support. If stored on an uneven surface, or not properly supported, the panels can develop a permanent cup or warp, especially when young (28 days after casting). Support should be no more than 30" on center for 1" thick panels. When panels are stacked, insure that the support lines up vertically through the stack from top to bottom so that the weight of panels above does not bend a panel below. Sight down the edges of the panels to make sure they are straight. Block between panels with panel pads (plastic with round surfaces) so that the rounded surfaces touch the finished side of the panel. This allows air circulation and will not create discoloration on the finished surface. If moisture is trapped in the concrete while stored, it could affect the appearance.

Concrete repairs

Chips and other issues can be repaired. Call Arcis if required.

Drilling holes in Arcis Panels

Holes can be drilled in Arcis thin pre-stressed panels for various reasons. Drilling holes improperly however can damage panels. **Do not drill through panels with hammer drills**, it will spall the back of the panel and greatly reduce the structural capacity. Holes can be drilled as small as 3/8" with diamond core bits mounted to non hammering drill or grinder motors. Contact Arcis for information on diamond bits or instruction on their use. A short video is also available.

Things to note when drilling through panels.

- Use non hammering diamond core bits
- Drilling close to an edge (less than 2") could cause cracking or breaking.
- For large openings (other than small attachments) contact Arcis to insure the structural adequacy of the panel.
- Some panels have metal bracketing on the back side. Reference the shop drawings to locate brackets prior to drilling.

Attachments to Arcis Panels.

Light weight items (20 lbs or less) can be attached to Arcis panels; Contact Arcis for engineering verification of any larger items. We suggest the use of a plastic expanding insert or lead insert for light attachment purposes (reference drilling holes section).