

**DESCRIPTION** • *ExpoCrete 711* is a surface-set retarder used for producing exposed aggregate finishes on freshly poured concrete. Applied on the surface of concrete, *ExpoCrete 711* delays the setting of the surface of concrete, while not disturbing the strength gain and setting rate of the underlying concrete, therefore allowing the easy exposure of the aggregates with minimum aggregate displacement and a controlled depth of exposure. Unlike washing and brushing alone when the concrete is hard enough to walk on, *ExpoCrete 711* allows the concrete below the surface to set normally, thereby developing a firm bond to the aggregates and facilitating a far more uniform and controlled exposure with very little aggregate pop-out. Without the use of *ExpoCrete 711*, the concrete surface hardens while the surface of the concrete is being brushed and washed, resulting in progressively more shallow exposure from the beginning to the end of a pour. On the other hand, *ExpoCrete 711* also allows more time and control for exposure, resulting in more uniform exposure throughout the work day and making it possible to cast larger areas. Compared to sandblasting, *ExpoCrete 711* is more environmentally friendly and produces a more natural and attractive look with no scarring of the aggregates or matrix.

**USES** • *ExpoCrete 711* is applied to the surface of freshly-placed concrete in order to retard the setting of the surface to a depth of 1.5 to 4mm without disturbing the setting rate and strength gain of the underlying concrete. *ExpoCrete 711* is used for the exposure of the aggregates of the concrete in order to produce exposed aggregate textured finishes on hardscape concrete. *ExpoCrete 711* may be used on concrete treated with *PaveCrete 500 Integral Color Admixture* to produce highly decorative and attractive concrete surfaces. *ExpoCrete 711* may also be used on *TopCrete 700 Exposed Aggregate Overlay*.

#### **ADVANTAGES** •

- ✓ Facilitates controlled exposure of the aggregates while minimizing aggregate pop-out.
- ✓ More uniform exposure than washing and brushing alone.
- ✓ Allows more time for exposing the aggregates.
- ✓ No scarring of the aggregates or matrix.
- ✓ Easy to use.
- ✓ Water-soluble; cleans with fresh water.

**LIMITATIONS** • *ExpoCrete 711* is not intended for vertical applications. *ExpoCrete 711* will delay the setting of the concrete surface, but will not prevent the final setting of the concrete surface. Therefore, exposure of the aggregates must take place 8 to 20

hours after concrete casting, depending on weather conditions and temperature, otherwise the aggregates will be impossible to remove without sandblasting. Do not use on concrete containing calcium chloride or other set accelerators. *ExpoCrete 711* must be protected from freezing. Do not store in metal sprayers or containers for extended periods of time.

**DEPTH OF EXPOSURE** • The depth of exposure will depend on the surface porosity of the concrete, the time of the application in relation to setting of the concrete, the cement content of the concrete, the quantity of liquid applied, the time lapse between application and exposure procedure, the water-cement ratio, and temperature / weather conditions. It is highly recommended to first test on a small area or on representative test panels. A wood-float finish will normally produce an exposure depth of approximately 5mm, and a steel-trowel finish will be exposed to approximately 3mm.

**COVERAGE** • *ExpoCrete 711* must be applied full strength; DO NOT DILUTE. Exact coverage rate will depend on the method of application, age and composition of the surface, texture and porosity of the surface and the desired exposure. Approximately 3.5 – 5.3 m<sup>2</sup> per liter is dominant.

**APPLICATION** • Production of exposed aggregate architectural concrete finishes required skill and experience. Many factors could affect the end result, including mix design, timing, application technique, experience, concrete color, aggregate shape and size, weather conditions, and other factors. Therefore, it is highly recommended to produce samples of adequate size to verify and approve the final appearance and finish.

The concrete should be placed and consolidated so that it completely fills the formwork; vibration and tamping should be minimized so that the aggregates stay near the surface. Screed and float the concrete to the desired finish level and flatness. Special aggregates may also be seeded into the surface of the concrete then tamped in and floated. The concrete surface may either be wood floated or steel troweled depending on the depth of exposure desired.

Weather conditions and temperature will greatly affect the retarding process and the length of time the surface remains retarded. Hot, dry, and windy weather will cause the liquid to evaporate quicker. On extremely hot and dry days, apply in the morning when the concrete surface is still cool. Covering the surface with clean, non staining, kraft curing paper will extend the retardation time. Rain and morning

## ExpoCrete 711 Concrete Surface Retarder

due will cause the compounds to wash off prematurely and may stain adjacent areas. *ExpoCrete 711* is a yellow-green liquid which will decompose in sunlight after drying. It is water-based and has no staining effect or unpleasant or noxious smells.

*ExpoCrete 711* must be applied full strength (undiluted). For best results, apply with a low pressure hand-pump sprayer to fresh concrete after all finishing has been done and surface water has disappeared, just after the concrete loses its sheen. Application can also be by roller or soft-bristle brush, however spraying is preferable. *ExpoCrete 711*'s yellow-green color can help in visually identifying areas that have sprayed and insure uniform coverage. *ExpoCrete 711* will retard the setting of the concrete surface, but it does not prevent the initial and final set of the concrete. The retardation length is influenced by many factors as mentioned above. Removal of the surface mortar can be started within about 8 to 24 hours after the initial set of the concrete. Time will vary depending on conditions affecting the setting of concrete surface mentioned previously. Test aggregates exposure on a small area prior to general exposure to determine if the underlying concrete has reached sufficient strength to minimize aggregates dislodging during the washing and brushing process. Use a stiff bristle broom and water to loosen the mortar and remove with a low pressure hose sprayer. Use of a pressure washer is useful on large areas.

**CURING** • Curing should be carried out immediately after the aggregates have been exposed either by conventional methods or by the application of curing agents. Avoid the use of any materials that contain sodium-silicate or the use of plastic sheeting or misting techniques. The use of curing agents is not recommended on concrete that will be later stained. Insure the compatibility of curing agents with the sealer if it will be later applied to the concrete surface.

**SEALING** • For enhanced protection of the concrete surface from stains and to bring out the color of the concrete and aggregates, it is recommended that the surface be sealed with *A-Z Ultra Sealer*, *A-Z Super Sealer*, *A-Z Mega Sealer*, *ElastoCrete 212*, or equivalent sealer. Refer to the relevant CCC technical data sheet for application instructions.

**CLEANING** • Clean all tools and equipment promptly with fresh water.

**STORAGE & SHELF LIFE** • Do not store under direct sunlight, near sources of heat or combustible materials, or in freezing conditions. Container must be tightly sealed and stored upright at all times. Shelf life is 12 months from date of purchase.

**SAFETY PRECAUTIONS** • WARNING: LONG TERM EXPOSURE TO ALUMINUM MAY PRODUCE HYDROGEN GAS. EYE AND SKIN IRRITANT. KEEP AWAY FROM CHILDREN. HAZARDOUS. Avoid contact with skin and eyes. Use under adequate ventilation. Wear proper protection including vapor mask, rubber gloves, goggles, protective clothing, and chemically-resistant apron and boots. DO NOT TAKE INTERNALLY, MAY BE FATAL IF SWALLOWED. MAY CAUSE CANCER. First aid: Eyes – flush with water and seek medical attention immediately. Ingestions – give several glasses of water or milk and seek medical attention immediately. Contact with skin – wash affected area immediately. Inhalation – move to fresh air.

**PACKAGING** • 20 liter containers.

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### Creative Concrete Concepts

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