

INTEGRACOAT

CRYSTALLINE WATERPROOFING COATING

Product Description:

INTEGRACOAT is a state-of-the-art component, penetrating cementitious material which waterproofs and protects new or old structurally sound concrete. It resists strong hydrostatic pressure and is not a vapor barrier (allows concrete to "breathe"). INTEGRACOAT is powered by Aquafin's advanced crystalline technology which chemically reacts with moisture and free lime to reduce the water absorption of the resultant cement matrix within the concrete. This is a result of the formation of nano-scale crystals by the active catalysts present in the capillary system. This sustains a durable waterproof effect in the concrete, thereby blocking the passage of water. This reaction will continue to take place anytime water is present for the life of the concrete structure whereby making the INTEGRACOAT a truly permanent and integral waterproofing solution. The INTEGRACOAT nanocrystals will also grow in and along static hairline cracks sealing them and preventing further incoming water.

Typical Properties:

Exterior (positive side) or interior (negative side) waterproofing of below-grade foundations, basements, retaining walls, utility vaults, and elevator pits. Water tanks, wastewater tanks, water catchment basins, manholes, parking garages, tunnels, and slurry walls.

Advantages:

- Advanced crystalline technology that penetrates deep into the concrete.

- Potable water approved.
- Applied to the moist (damp) substrate Environmentally friendly, organic–non–toxic, zero VOCs.
- Permanently active
- Easy to use - needs only water for mixing.
- Can be applied to green concrete as soon as forms are stripped
- Protects concrete against freshwater, salt water, wastewater & aggressive groundwater
- Resists strong hydrostatic pressure
- Applied to positive or negative side water pressure.
- Seals and post-seal shrinkage cracks, up to 1/64" (0.4 mm).
- Contains no chlorides.
- Cost effective Crystalline.

Waterproofing Properties:

INTEGRACOAT contains active waterproofing chemicals which react with moisture and free lime in the concrete, creating insoluble crystalline complexes which seal the capillaries and minor shrinkage cracks. They penetrate even against strong hydrostatic pressure, becoming an integral part of the concrete factors such as ambient temperature, the density of concrete, moisture present, and weather conditions all can affect the timing of the sealing process. Under dry conditions the INTEGRACOAT chemicals lie dormant, however, they reactivate whenever re-exposed to moisture. INTEGRACOAT post seals static shrinkage cracks up to 1/64" (0.4 mm), which occur after the product has been applied and cured. Substrate Preparation: The substrate



must be sound, clean, and have an "open" capillary system ("tooth and suction") and feel like fine sandpaper to ensure mechanical bond (surface adhesion) and allow INTEGRACOAT chemicals to penetrate. Horizontal surfaces should have a rough wood float or broom finish. Smooth-formed walls, or smooth-troweled slabs; must be roughened, otherwise, INTEGRACOAT application may not achieve a sufficient bond.

Surface Preparation:

- Remove all dirt, cement laitance, form release agents, curing compounds, loose particles, paints, etc. by means of wet or dry sandblasting, high-pressure water blasting (i.e. 4,000 psi (275 bar) adjusting higher or lower depending on 28-day concrete strength) or other suitable mechanical means. Do not apply to smooth slabs.
- Stop active water leakages using FIX 10-S or Aquafin PI & P4 for severe infiltration.
- Remove all protrusions, work back to sound concrete, and chisel out any honeycombed or damaged areas. Faulty construction joints and visible cracks not subject to movement, exceeding 0.02" (0.4 mm) should be routed out to a U-shaped configuration approx. 3/4" (20 mm) wide and a minimum depth of 1" (25 mm). Fomite holes should be roughened.

Technical Data:

- Aggregate State: Powder
- Color: Cement grey
- Pot Life 30 minutes.
- Setting Time: 45mins.
- Portable water safe.

Surface Repair:

Fill repair areas flush with the surface using ASOCRET® BIS 1/6. Thoroughly rinse all the surfaces to be waterproofed with clean water. Pre-

water several times so that the concrete or masonry is saturated to control surface suction and ensure the growth of the crystalline formation deep within the pores of the substrate. When INTEGRACOAT is applied, the surface should be damp, but not wet. Any surface water on horizontal surfaces must be removed. Mixing: Approximate mixing ratio is by volume: 3 parts powder to 1 parts water 25 kgs powder to 7 to 7.5 litres water. Add the INTEGRACOAT powder to water and mix thoroughly until the mixture is completely free of lumps. Mix only as much material as can be used within 30 minutes. INTEGRACOAT should be mechanically mixed with clean water to a consistency of thick oil paint. Separate containers (equal volume) should be used for measuring the powder and water.

Application:

- A. Brush application: Apply two coats of INTEGRACOAT, in the specified quantity, in a slurry consistency with a masonry brush. Brush on the material evenly and work it well into the surface. Apply the second coat while the first coat is still tacky ("green").
- B. Spray Application: INTEGRACOAT may be applied using appropriate compressed air spray equipment. Spray on one or two coats, according to the specification, in circular movements. Apply the second coat while the first coat is still tacky ("green").

Curing and Protection:

- Outdoor, or exposed treated areas: Keep damp (moist) for a period of 2 - 3 days for standard waterproofing applications, and 7 days for potable water tanks. Start curing as soon as INTEGRACOAT has hardened sufficiently so as not to be damaged by a fine water spray.
- The freshly treated surfaces should be protected from rain for a minimum period of 24 hrs.



- Protect exposed surfaces against direct sun, wind, and frost by covering them with plastic sheeting, burlap, or similar. Do not lay plastic sheeting directly on INTEGRACOAT as air contact is required for proper curing.
- Backfilling can be carried out 36 hrs after the completion of the INTEGRACOAT treatment. Protection boards are generally not required. Backfill material shall be moist and not contain rocks or larger aggregates.
- Indoor treated areas: Self-curing in cool areas with high humidity.
- Keep moist for 2 - 3 days in areas with low humidity and 7 days for potable water tanks.
- Provide air circulation for a minimum of 24 hrs. following the INTEGRACOAT treatment in poorly ventilated areas and deep pits.
- Water Tanks: Can be carefully filled after 3 days. Do not fill large tanks faster than 6½ feet per 24 hrs (2 m/24 hrs).
- After complete curing of INTEGRACOAT, potable water reservoirs should be thoroughly rinsed with potable water prior to being placed in service. Decoration, Coating and Tiling.
- All surfaces treated with INTEGRACOAT which are to be coated or painted must be left to cure for at least 4 weeks. At the end of the curing period, the surfaces should be saturated with water and neutralized with a 7:8 solution of muriatic acid. Following this, the areas must be thoroughly rinsed with water.
- When a plaster or render finish is required on top of INTEGRACOAT treatments, it is essential to apply a thin, rough cast of sand and cement on the final INTEGRACOAT layer when it has reached the initial set. If this is not practical, carefully clean the hardened INTEGRACOAT surface and apply an appropriate bonding agent prior to rendering.
- Do not use for waterproofing applications under thin set tile mortar (i.e., swimming pools, balconies, etc.).
- Slabs on or below grade to be covered with vinyl tiles or other nonbreathable products (i.e., epoxy, some carpets, resilient flooring, etc.)

Storage & Shelf Life:

INTEGRACOAT must be stored in a dry enclosed area off the ground. Shelf life in unopened, dry undamaged bags or pails is 72 months. Note: Installer is responsible for proper product application. Site visits by Aquafin personnel or representatives are solely for the purpose of making technical recommendations, not for providing supervision or quality control.

Safety:

The use of a dust mask, safety goggles and gloves is recommended. This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use. Keep out of the reach of children.

Limited Warranty:

AQUAFIN PAKISTAN warrants this product for a period of one year from the date of installation to be manufactured free of defects and to be consistent with its technical properties as stated in our current Technical Data Sheet. This product must be used as directed and within its stated shelf life. Our product recommendations are based on industry standards and testing procedures. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. We assume no warranties written, expressed, or implied as to any specific methods of application or use of the product.

Note:

- Do not apply INTEGRACOAT at temperatures below 5°C or to a frozen substrate. For temperatures of 32°C and above, make sure the substrate remains damp through consistent water spraying
- Do not apply to a dry substrate.
- Use AQUAFIN®-1K for brick or stone substrates.

