Exposed aggregates concrete

EX\textsuperscript{3} Estetica special concrete range

Technical data sheet
General information

The exposed aggregates concrete is a decorative and durable refurbishment solution for the exterior spaces – both horizontal elements and vertical ones (roads and access ways, esplanades, terraces, stairs, etc.). In the exposed aggregates concrete, the aggregates (stones) from the element’s surface are usually embedded into concrete, are left visible in order to create very well-seeming surfaces. By using some nice aggregates or by the introduction into the concrete’s mass of some pigments, of some glass or phosphorescent aggregates, it may be created an extremely attractive image of the circulation spaces.

EX³ Excellence at cube

When only durability is not enough

Excellence in constructions is not just resistant, durable, safe and innovative buildings. When we say that the future will be more demanding with the builders, we consider not only the technical challenges that they are likely to be faced with. Some of the most difficult tests that the architects will have to pass and also the designers and the builders will be those of aesthetic nature. The people’s preferences are becoming more and more diverse, and Holcim is ready to cope with the new trends. The final beneficiaries of a construction are increasingly tougher to satisfy regarding the style and the design of the building and want to have more and more options. This is why, in the range of special concretes EX³, Holcim introduced the decorative concretes EX³ Estetica aimed to offer the perfect solution to increasingly complex and refined expectations.
Applications – Areas of use

Due to its aesthetic effect, but also to its durability and its skid proof effect, the exposed aggregates concrete is used in different projects, such as:

1. Private projects, residential and/or commercial
   - access ways, parking lots
   - terraces, garden alleys
   - border edges of pools
   - fences, stairs, pedestals and decorative walls.

2. Public projects
   - pedestrian areas (streets, squares, esplanades, quays)
   - parking lots, passages, roundabout, sidewalks, bicycle tracks
   - alleys, parks and gardens
   - facades, retaining walls, walls.

General information

There are different techniques of producing exposed aggregate concrete, each of them offering a distinct and surprising aspect. The exposure technique of aggregates is relatively simple, consisting in applying a setting time retarder for the freshly poured concrete. When the concrete is hardened (usually after 18-24 hours from casting) the surface is cleaned with a strong water jet in order to remove the superficial, inert layer of mortar/grout thus obtaining the exposure of the aggregates.

The exposed aggregates concrete complies with the recommendations of CP012-1:2007 depending on the resistance class chosen.

Advantages of the exposed aggregates concrete

Esthetics and versatility
- Exterior and interior applications in both horizontal and vertical elements;
- Harmonization in various ambient contexts.

Resistance and durability
- Durability in time, in various conditions of temperature and humidity (with the application and maintenance of the pellicle);
- Resistance to high wear.

Functionality
- Skid proof effect (the textured surface increases the resistance to skidding);
- Can be poured on inclined or uneven surfaces;
- Easy to maintain.

Quality safety
- Work placing with professional applicators, approved by Holcim;
- Technical support from Holcim’s team;
- International expertise;
- Warranty of Holcim’s quality.
Recommended for the work placing

The work placing is recommended to be done with an applicator approved by Holcim and there should be taken into consideration the following main aspects:

- On site there will not be added water or other materials into the concrete.
- The surface of the freshly cast concrete should be protected, bounded and appropriately marked until commissioning.
- There will not be performed works of exposed aggregates concrete if there are forecasts of rain or extreme temperatures (heat or cold).
- The pouring of the exposed aggregates concrete is done by trough or ladle. In case of vertical elements, it may be poured by pump, ensuring the access of the hose into the formwork until the casting area.
- Before the casting, there will be performed the works of preparing the substrate, including the adequate soil compaction and the obtaining of a flatness as good as possible.
- The support will be moistened before casting and, if appropriate, will be protected by a sheet.
- It will be avoided the excessive compaction of the concrete in order to prevent the migration of large aggregates from the surface to be processed.
- The deactivation solutions will be applied on the concrete after the bleeding water is evaporated.
- The application of the setting deactivation/delaying film will be done in an uniform layer:
  - on the formworks, in case of vertical surfaces
  - on the exposed surface of the concrete, after its finishing in case of horizontal surfaces.
- In case of low exterior temperatures, the concrete will be protected in order to be washed after 24 hours.
- The deactivation substance film prevents the rapid evaporation of the water, thus protecting the concrete.

By EX® Estetica, Holcim Romania offers the best decorative solutions. Holcim specialists will be permanently involved in the deployment of the projects which imply using the exposed aggregates concretes, offering guidance and instructions thus insuring that the results obtained are at the level of Holcim’s standards.

Contact

[Contact information provided]