ARDEX CE 826

Rapid Curing Structural Micro Concrete

Shrinkage compensated

Rapid cure – Trafficable in 2-3 hours

High early strength

Installs from 20mm to 100mm neat, and up to 250mm when extended with aggregate

For civil engineering and general construction where time is critical

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DESCRIPTION

ARDEX CE 826 High Performance, Rapid Curing Structural Micro Concrete is a pumpable and pourable structural micro concrete designed for deteriorated exterior and interior concrete above, or below grade. It is formulated using a blend of well graded sand, engineered cements, and special chemical additives for infrastructure projects where rapid return to service is critical. It is easy to apply and readily bonds to concrete. ARDEX CE 826 is fast-setting, allowing for foot traffic in as little as 1-2 hour and vehicular traffic in 2 -3 hours.

RECOMMENDED USES

- Spall repairs on rigid pavement
- Bridge bearings
- Filling of airport lighting cable trench
- Airport parking stands
- Repair for structural members in marine environment
- Parking garages
- Normal service commercial, institutional, and multi-unit residential applications

ADVANTAGES

- High early strength gain
- Dimensional stable
- High bond to concrete
- Chloride free
- High chloride and sulphate resistance
- Suitable for deep pours
- Wear resistant

SURFACE PREPARATION

The substrate must be clean, sound, and free from all grease, oil, dust, laitance, and other surface contaminants such as curing membranes. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate. Cut the edges of the repair vertically to a minimum depth of 20mm until the area is squared or boxed in shape. Greater depth is required for heavy duty trafficable applications. Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue. Concrete should be removed from around and behind all corroding rebar to avoid future contamination of the repaired area. The substrate must be prepared correctly to remove all the deteriorated and detached concrete until a strong substrate with a rough surface is obtained. Any areas previously repaired and which are not perfectly bonded must also be removed.

PRIMING

To reduce the porosity of the substrate, priming the prepared substrate with ARDEX P 507 is recommended. Alternatively, the prepared substrate can be pre-soaked using water for at least 2 hours before applying ARDEX CE 826. Remove excess freestanding water on the surface prior to the application of ARDEX CE 826. The surface should be damp to touch without standing water.

FORMWORK PREPARATION

The area to be poured must be enclosed with good quality rigid watertight formwork. The formwork must be able to rigidly confine the ARDEX CE 826 until it has set. It is recommended to use an appropriate form release agent. Formwork should be flushed out just prior to application without any standing water present.

MIXING

Each 25kg bag of ARDEX CE 826 will require approximately 3.0 – 3.2L of water. Measure approximately 80% of the required water into a tumble style agitator and mix for approximately 1 minute. Then add the remaining water and mix for about 2 – 3 minutes, or until it is fully homogenized. The mixed material must be poured immediately for best results. Mix only the amount of material that can be placed within 15 minutes.

APPLICATION

ARDEX CE 826 is to be applied onto the pre-wetted or primed substrate. Make sure that the micro concrete is applied whilst the substrate is still damp, or the substrate primer is still slightly tacky. It should be applied in a continuous pour to avoid cold joints. It is recommended to smooth the material with a steel trowel after the last pour. For ease and efficiency of application, ARDEX CE 826 can be pumped using a suitable automatic concrete mixing pump. Follow the instructions as set by the pump manufacturer. It is important to note that ARDEX CE 826 is an extremely fast setting material and should be pumped in shorter distances than with regular cementitious products.

ARDEX CE 826 can be installed from a minimum depth of 20mm to 100mm. For application depths greater than 100mm, and up to 250mm, extend ARDEX CE 826 by adding aggregates dampened to an SSD condition. Mix the aggregate with water first, and then ARDEX CE 826 until is fully homogenized.

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CURING

As with all cementitious products ARDEX CE 826 must be cured properly to ensure maximum performance. Apply ARDEX P 507 as a curing compound after initial set on all exposed areas. If form work is used, the curing compound should be applied immediately after the form work is removed. Curing compounds should be applied onto the surface of the ARDEX CE 826 according to the Technical Data Sheet of the curing compound. If a curing compound was not used, wet hessians and/or plastic sheets should be placed on the surface for 3-7 days.

PAY ATTENTION TO THE FOLLOWING:

1. Do not over-water. This can lead to segregation, shrinkage and strength reduction.
2. Long narrow repairs should be avoided where possible and pours arranged to achieve a length: minimum thickness ratio, of not more than 20:1
3. Do not install below 10°C surface and air temperature
4. Store bags and water reservoir for mixing in a shaded or conditioned space. Cool water and powder can greatly extend the working time in hot conditions.

PACKAGING

ARDEX CE 826 is packed in polylined paper sacks – net weight 25kg

STORAGE AND SHELF LIFE

ARDEX CE 826 has a shelf life of 6 months when stored in the original, unopened packaging in a dry place at 23°C and 50% relative humidity.

CLEAN UP

All grouting equipment shall be thoroughly washed with clean water after grouting operations for that day are completed.

TECHNICAL DATA

Mixing Ratio	3.0 – 3.2L of water per 25kg bag
Coverage	25kg of powder yields 12.1L of grout @ 12% water 12.3L of grout @ 13% water 1m^3 of grout requires 83bags of powder @ 12.5% water

Characteristics	Test Method	Test Results
Compressive Strength 2 hours 4 hours 1 day 7 days 28 days	BS EN 12190 : 1999	 ≥ 20 Mpa ≥ 35 Mpa ≥ 50 Mpa ≥ 60 Mpa ≥ 75 Mpa
Flexural Strength 7 days 28 days	BS EN 196-1: 2006	 ≥ 6 Mpa ≥ 8 Mpa
Change in Height	ASTM C1090 : 2015	0% to 1%
Chloride Content	BS EN 1015-17 : 2000	≤ 0.02%
Time to Traffic	Visual	Foot: 1 - 2 hr Vehicular: 2 - 3 hr
Fresh Density	BS EN 1015-17-2000	2250 ± 100kg/m^3
Setting Time	ASTM C953 : 2010	Initial Set > 20 min Final Set < 60 min

Technical data according to ARDEX Quality Standards. All data based on a partial, in-lab mix at 23±2°C and RH 55±10%, water powder ratio 0.125

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SAFETY PRECAUTIONS

ARDEX CE 826 should not come into contact with the skin and eyes or to be swallowed. Ensure adequate ventilation and avoid inhalation of vapors. Wear suitable gloves, goggles and other protective clothing. The use of barrier creams can provide additional skin protection. When working in confined areas suitable respiratory equipment must be used. In case of contact with skin, rinse with plenty of clean water then wash with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water, and then seek medical attention without delay. If swallowed, seek medical attention straight away, do not induce vomiting. The Safety Datasheet (SDS) is available at www.ardex-quicseal.com

DISPOSAL/SPILLAGE

Please refer to the Material Safety Data Sheet for the safe handling, storage and disposal of chemical product.

DISCLAIMER:

The technical datasheets are based on the latest information and given in good faith and represent the best of our knowledge and experience at the time of printing. They are primarily offered for user's consideration and evaluation. It is the responsibility of the user to conduct their own tests to validate the suitability of the products. It is also the responsibility of the user to ensure that the products are used and handled correctly and in accordance with any applicable standards, the product instructions and recommendations and only for the uses they are intended. As we have no control over site conditions and the execution of the work, we accept no liability for any loss or damage which may rise as a result thereof. We also reserve the right to update the information at any time without prior notice to you to reflect our ongoing research and development program.

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