



ARDEX EP 2000

Multi-Functional Epoxy Resin

- Fills, repairs and seals cracks in cement and sand screeds
- Can receive loads after 24 hours
- Resistant to chemicals
- Easily mixed and can be poured into cracks
- High Strength Primer
- Solvent-free



DESCRIPTION

ARDEX EP 2000 is a solvent-free, low-viscosity, two-component epoxy resin without fillers. The 6kg unit consists of 4.3kg of resin (Component A) and 1.7kg of hardening agent (Component B). After hardening, ARDEX EP 2000 is water-resistant, frost and weather-resistant, has a high inherent strength and bonds virtually inseparably to all compatible substrates. ARDEX EP 2000 is resistant to aqueous salt solutions, a range of dilute mineral and organic acids as well as organic liquids and solutions.

USE

ARDEX EP 2000 is an epoxy resin for use with cement and sand screeds as a crack repair and filling system. It can also be used for priming concrete and other structurally sound and solid substrates, including terrazzo, ceramic tiles and epoxy coatings, prior to the application of the appropriate ARDEX product.

ARDEX EP 2000 produces an extremely hard surface and strong bond to the substrate to help minimise cracking in ARDEX Smoothing and Levelling Compounds. ARDEX EP 2000 under most circumstances is applied in one coat, and then sand blinded. ARDEX EP2000 is suitable for internal and external applications.

APPLICATION

The substrate must be dry, rigid, load-bearing and free from release agents, curing compounds, surface laitance and other barriers to adhesion. A single 6kg container of ARDEX EP 2000 contains separate, pre-measured quantities of the resin (Component A in large base unit) and the hardener (Component B in smaller unit).

The hardener (Component B) is added to the resin (Component A). Pour all of the hardener into the resin container and stir thoroughly for a minimum of 3 minutes, using a low speed drill and an epoxy mixing paddle. Once mixed, pour some of the epoxy back into the hardener container, stir for 10 seconds, and then pour all of the contents back into the main resin container. Mix for an additional 30 seconds before application.

NOTE: After stirring, ARDEX EP 2000 must be used and applied immediately and without interruption. Due to its high reactivity, ARDEX EP 2000 has a tendency towards intense heat build up, which is higher the greater the amount of resin still in the container. If this occurs, the container should not be touched and, if necessary, closed with the lid loosely in position and transported by the handle into a cool ventilated room.

Surface application is usually with a short-pile roller or suitable brush. After mixing, ARDEX EP 2000 has a working time of approximately 30 minutes at temperatures between 18°C and 20°C. Low temperatures will extend, and higher temperatures will reduce the working time. ARDEX EP2000 must be used at temperatures over 5°C.

Whilst in a fresh state, ARDEX EP2000 must be blinded with a consistently dense layer of dry ARDEX Fine Aggregate. In order to provide a mineral key for the subsequently applied ARDEX product, it is important that the area is sand blinded to saturation, to ensure that the sand is held in the ARDEX EP 2000 resin, but a large proportion of the sand grain is exposed above the resin surface. Remove any excess sand with a vacuum cleaner once the ARDEX EP 2000 has hardened.

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ARDEX EP 2000 can be subjected to mechanical loads typically after hardening for 24 hours at temperatures between 18°C and 20°C. Full resistance to chemicals is achieved after approximately 7 days.

PRIMING AND HARDENING SUB-FLOORS

When priming, the concrete, sand and cement screeds, anhydrite screeds and anhydrite flow screeds, must be absorbent, open-textured, dry and, in itself, load-bearing. Anhydrite flow screeds must have been ground back to a solid and structurally sound, rigid surface free of dust and laitance.

ARDEX EP 2000 is applied thickly to the substrate, with one sand blinded coat usually being sufficient. With very porous, absorbent substrates a second sand blinded coat may have to be applied after the first coat has hardened.

ARDEX EP 2000 AS A CRACK REPAIR/FILL MATERIAL

The substrate must be firm, load-bearing and free from release agents, curing compounds, laitance and other barriers to adhesion. ARDEX EP 2000 has a low viscosity and therefore a high penetration capacity.

Fine, non-continuous cracks can be sealed with neat ARDEX EP 2000. Before repairs are conducted throughout the screeds it is advisable to identify cracks which are suitable for filling and repairs, agree the course of action with the site engineer or project manager, then arrange a trial area to establish that the repair method is appropriate for the cracks identified.

Crack Repair Guidance

The recommendations in this datasheet are based on the following requirements:

- 1) The repairs are required to reduce cracks reflecting through subsequently applied materials and flooring, and not to reinstate any loss of strength or structural integrity.
- 2) The cracks must be dormant, as ongoing movement of the crack is likely to result in the further development of new cracks away from the repair, or the reopening of the existing crack. Re-cracking as a result of any further movement cannot be prevented, and may indicate the need for the provision of movement joints in the sub-floor. If in doubt, tests must be carried out.

Dormant Cracks and Saw-Cut Joints

ARDEX EP2000 has a low viscosity, and can therefore be used to fill small, non-moving cracks in screeds. Cracks up to 1.5 mm wide should be filled with the neat ARDEX EP2000. For fine cracks, ARDEX EP2000 can be used to fill the crack by following the course of the crack, drilling up to 2/3 of its thickness at intervals of 10cm. The minimum diameter of the boreholes should be 12mm. Pour the ARDEX EP2000 resin into the holes/crack to the surface level and sand blind with ARDEX Fine Aggregate, as described in the application section.

Where the crack may not be wide enough to ensure adequate filling, a V-shaped cut may be made with an angle grinder along the crack to provide entry for the ARDEX EP 2000 to fill the crack.

NOTE: Any dust made by drilling or cutting should be removed with a vacuum, prior to filling the crack.

ARDEX EP 2000 has a low viscosity and therefore a high penetration capacity. Fine, non-continuous cracks can therefore be sealed with ARDEX EP 2000 without fillers.

However, ARDEX EP 2000 is usually filled by mixing in Portland Cement, cement based filling compound powders, tile adhesive powder, self-levelling compound powders and thin bed mortar powders of fine silica sand (0-1mm).

For cracks up to 5mm in width use a mixture of 1 part volume ARDEX EP 2000 to 1^{1/2} parts volume of filler. An accordingly high filler content can be used for wider cracks. The freshly repaired areas must be blinded with fine silica sand.

Epoxy Crack Stitching

This process is intended to hold the sides of the crack in position. A number of angle grinder cuts can be made across the crack at approximately 100mm spacings, or at those defined by the engineer or project manager. The cuts must be large enough and deep enough to accommodate suitable stitching pins. The stitching pin is then slotted into the crack, with the corrugated edge facing upwards.

The mixed ARDEX EP2000 is then poured into the cuts so that it covers the pins. Whilst the EP 2000 is still wet, ARDEX Fine Aggregate is spread over the top to provide a bonding key. Refer to the application section for guidance on exposed sand in the blinding process.

Moving Joints and Cracks

Under no circumstances should cracks or joints subject to movement, such as expansion joints or isolation joints, be filled with ARDEX EP2000. All moving joints and cracks must be brought through to the surface and finished with an appropriate trim or movement joint profile.

ARDEX cannot be held responsible for problems which arise from expansion, isolation or construction joints; or from existing cracks or new cracks that may develop after the system has been installed.

Prior to filling with ARDEX EP2000, cracks, drillholes and cuts must be vacuum cleaned in order to remove any residual dust and dirt.

PRECAUTIONS

- Irritates the eyes and the skin.
- Sensitisation is possible.
- Detrimental to health when swallowed.
- Can cause burns after prolonged exposure.

Avoid contact with the eyes and skin. In case of eye contact wash thoroughly with water at once and consult a doctor. When mixing, wear protective glasses and gloves. Protective gloves are required when using ARDEX EP2000. Ensure that rooms are well ventilated. Keep work clothes clean, change clothing which have ARDEX EP2000 deposits, residues or traces. For the latest Health and Safety information on this product consult the current Health and Safety Data Sheet.

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Technical Data According to ARDEX Quality Standards

Mixing ratio:	Specified by the packaging
Fresh mixture weight	Approximately 1.1 kg/litre
Working time (20°C):	Approximately 30 minutes
Load-bearing capacity (20°C):	Can be subjected to mechanical exposure after approximately 24 hours. Can be subjected to chemical loads after approx. 7 days.
Walkability (20 °C):	After approximately 6 hours
Material requirement:	With surface application approximately 300g/m² per layer depending on the absorbency of the substrate. When sealing cracks and joints approximately 300g/m depending on the width and depth.
Packaging	6kg units of ARDEX EP 2000 are supplied in pre-gauged, metal duo containers. The hardener (Component B) is in the small container, and the resin (Component A) is in the large container with room to mix the hardener (Component B).
Storage and Shelf Life:	Can be stored for approximately 12 months in dry rooms, in unopened packaging.

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