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PRODUCT DATA SHEET

ARDEX K 301

Exterior Self-Smoothing Levelling and Resurfacing Compound

Features

Suitable for internal and external applications

For smoothing and resurfacing paths, drives, parking areas, courtyards, etc.

Cost effective solution for smoothing rough or impact damaged concrete

Fast setting - walkable after 2-3 hours

Rapid hardening - can withstand light vehicular traffic after 48 hours

Easy to mix and apply - pumpable

Apply from 2mm to 20mm thick in a single application

Ideal for levelling floors prior to the application of ARDEX DPM

Can be used with suitable resin coatings

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ARDEX K 301

Exterior Self-Smoothing Levelling and Resurfacing Compound

DESCRIPTION
ARDEX K 301 Exterior Self-Smoothing Levelling and Resurfacing Compound is a special fast setting cement-based product designed to smooth and level rough and damaged concrete surfaces in external and internal situations. ARDEX K 301 is a grey powder consisting of special cements, graded aggregates and high quality synthetic resins. When mixed with water, a fluid mortar is produced which sets within 2 hours and can normally be walked on after approximately 2-3 hours at 20°C. ARDEX K 301 can be applied from 2mm to 20mm in thickness. The set and hardened ARDEX K 301 is usually ready to receive light wheeled traffic after 48 hours at 20°C.

USE
ARDEX K 301 will smooth and level concrete surfaces such as balconies, patios, domestic driveways, garages, walkways and other concrete surfaces exposed to normal foot and rubber wheeled traffic. ARDEX K 301 can also be used for filling holes and repairing damaged floors, such as concrete or cement/sand screeds, as well as pre-smoothing concrete floors prior to the application of suitable damp proof membranes, such as ARDEX DPM.

NOTE: ARDEX K 301 is not recommended for heavy duty industrial floors, public highways or traffic with solid or metal wheels. ARDEX K 301 is suitable for permanently wet areas and may be used in swimming pools with the addition of a suitable waterproof layer on top of it. ARDEX K 301 is not recommended for areas of intensive abrasive use in wet areas. Do not apply ARDEX K 301 over asphalt or tarmacadam surfaces. The hardened ARDEX K 301 should be protected from spillages and materials that damage concrete surfaces. If required, dried ARDEX K 301 can be painted.

SURFACE PREPARATION
All concrete surfaces should be mature and at least 6 weeks old and must be hard, sound, thoroughly clean, free of all oil, grease, curing compounds and other barrier materials. The substrate can be dry or moist. ARDEX K 301 may be unsuitable for aged or frost damaged concrete subject to regular deflection from thermal cycling or mechanical loading.

Use ARDEX DGR degreaser to remove oil, grease or similar contaminants and rinse well. All concrete surfaces without a sufficient mechanical key must be prepared by mechanically roughening, wire brushing, scabbling or shot blasting the surface as necessary to ensure good adhesion. Vacuum clean the prepared surface to remove all dust and debris, and ideally wash the surface using high pressure water jet equipment. All cracks in new and old concrete should be repaired to inhibit cracking in the ARDEX K 301.

Any structural joints in the substrate must be carried through the ARDEX K 301. Concrete surfaces including absorbent surfaces, should be primed with ARDEX P 51 primer diluted 1:7 with clean water, applied with a brush or broom. Any puddles or surface water should be removed with a broom so that excess water is not incorporated in the mortar during application. On dense and smooth surfaces, sand blinded ARDEX R 3 E Solvent Free Epoxy Primer should be used. In doubtful cases a trial application is recommended.

MIXING
In a clean mixing container add the powder to the required amount of clean water whilst stirring thoroughly until a lump free mortar is produced. The mixing proportions by volume are approximately:-
5 parts ARDEX K 301 powder to
1 part clean water.
A 25kg bag requires 5 1/4 litres of water.

If gradient levelling has to be carried out, the water content must be reduced.

To pump the mortar, use continuous pumps with a capacity of 20-40 litres of mortar per minute.

Do not use excess water as this will reduce the strength of the set and hardened mortar.

The use of an ARDEX mixing paddle with a 10mm chuck slow speed (600 - 1000 r.p.m.) electric drill makes light work of mixing.

ARDEX K 301 mortar should be applied within 30 minutes at 20°C. This time is extended at lower and reduced at higher temperatures.

PRIMING
Very dense impervious surfaces should be primed with ARDEX R 3 E Solvent Free Epoxy Primer sand blinded with ARDEX Fine Aggregate.

APPLICATION
Pour the mixed ARDEX K 301 onto the prepared and primed substrate. The mixed mortar will flow out and self-smooth during the first 10 minutes of its 30 minutes working time. Spread the mortar using a steel trowel or float. For larger areas use the ARDEX gauging tool with thickness height adjustment to spread the mortar. A long handled ARDEX smoothing trowel can be used to simplify the finishing operation. See the ARDEX Tool Catalogue for details.

The applied ARDEX K 301 surface can be left with a trowel finish. Alternatively, to create a more non-slip finish, the water content should be reduced and then 'broom finished' once the initial set has occurred (approximately 40 minutes under normal conditions). If a second layer of ARDEX K 301 is required, this should be applied after the first layer has hardened fully. The first layer should be machine sanded (paper 16 to 36), cleaned and primed with ARDEX P 51 primer diluted 1:1 with water for dry indoor use and diluted 1:7 with water for external use or damp interior areas.

NOTE: Thickness of combined layers should not exceed 20mm. Once set, freshly applied ARDEX K 301 should be protected from adverse climatic conditions e.g. rapid drying, rain, frost, etc., until hardened. Apply at temperatures above 5°C.

THICKNESS
ARDEX K 301 can be applied neat from 2mm to 20mm thick.

COVERAGE
Approximately 1.6kg ARDEX K 301 powder/m^2/mm, i.e. approximately 3.0m^2 at 5mm thickness per 25kg bag.

PACKAGING
ARDEX K 301 is packed in paper sacks incorporating a polyethylene liner - net weight 25kg.

STORAGE AND SHELF LIFE
ARDEX K 301 contains a reducing agent to control the level of Chromium VI when mixed prior to use.

ARDEX K 301 must be stored in unopened packaging, clear of the ground in cool dry conditions and protected from excessive draught. If stored correctly, as detailed above, and used within 12 months of the date shown on the packaging, the activity of the reducing agent (added to control the level of soluble Chromium VI) will be maintained and this product will contain, when mixed with water, no more than 0.0002% (2ppm) soluble Chromium VI of the total dry weight of the cement content of this product. ARDEX K 301 must not be used after the end of the declared storage period.

PRECAUTIONS
ARDEX K 301 contains more than 20% Portland cement and, therefore, in line with current legislation, is classified as irritating to eyes and skin. For this reason the following precautions should be observed:- Avoid contact with skin and eyes; in case of contact with the eyes, rinse immediately with plenty of water and seek medical advice; wear suitable gloves and keep the product out of the reach of children. Avoid generation of airborne dust during mixing..

For further information consult the relevant health and safety data sheet.

TECHNICAL DATA

Bulk density of powder	approx. 1.37kg/litre
Weight of fresh mortar	approx. 1.94kg/litre
Initial Set (Vicat)	approx. 40 minutes
Final Set (Vicat)	approx. 2 hours

Compressive Strength

After 7 days	20.0 N/mm^2
After 28 days	28.0 N/mm^2

Tensile Bending Strength

After 28 days	6.5 N/mm^2

Ball Pressure Hardness (Brinell)

After 28 days	65 N/mm^2

Overcoat time for industrial coatings

Thickness of ARDEX K 301	Time
Up to 5mm	2 days
Up to 10mm	5 days
Up to 20mm	7 days