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# ARDEX CL 1

## Self-Leveling Underlayment

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Levelling and smoothing of floor areas

For thicknesses from 2 - 6mm in one application

Low tension

Easy to grind

Internal Use Only



ARDEX HONGKONG LTD  
Unit D, 16/F, CNT Tower, No.338  
Hennessy Road,  
Wan Chai, Hong Kong  
TEL: 852-25296325  
FAX: 852-25298615

SH Office:  
ARDEX (SHANGHAI) CO., LTD  
4F, Building 2, No. 481,  
Guiping Rd.,  
Shanghai, China  
TEL: 86-21 64161800  
P.C.: 200233

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## Self-Leveling Underlayment

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### DESCRIPTION

ARDEX CL 1 is a general purpose self levelling underlayment, walkable after approximately 4 hours and ready designed for use after 48 hours (@ 5mm thickness). Grey powder with special cements, high quality synthetic resins, selected fillers and other special additives.

### AREAS of APPLICATION

Dry, internal, cementitious sub-floors.  
Filling, smoothing and levelling of concrete slabs and cementitious screeds prior to application of floor coverings such as vinyl, LVT, carpet and other different kinds of floors.

### SUBSTRATE PREPARATION

Principally, the substrate must be mature, sound, solid, clean and dry with good surface integrity – in other words, sufficiently cured, firm, load bearing and free from all contaminants such as dust, laitance, oil & grease, adhesive & coating residues, release agents, curing compounds, etc.

Concrete floors must be at least 4 weeks old. Mechanically prepare the substrate surface using recommended preparation methods such as shot-blasting, scarifying, diamond grinding, shaving or other suitable methods to provide a roughened, clean, sound, solid and open porous surface. Acid etching is not an acceptable method of cleaning the subfloor. Do not use solvents or sweeping compounds. Repair minor defects such as superficial cracking and holes using an appropriate Ardex product, i.e.: A 45 or solvent free liquid epoxy. All joints and cracks subject to movement must be brought through to the final floor finish and suitably detailed for the particular application. Substrates where the measured moisture level is above 5.5% or 70% by Relative Humidity (RH) test method must first be sealed with ARDEX WPM300 prior to any leveling installation. Direct to earth sub-floors must be protected from rising damp by containing a functioning damp-proof membrane (DPM) – if this is not included underneath the substrate, then use ARDEX WPM300.

After suitable preparation, the substrate must be thoroughly vacuumed and properly primed for a successful installation.

For further information, contact ARDEX Technical Services.

### PRIMING

Normal/Standard Concrete & Existing Ardex Self-Levelling Compounds

Use ARDEX P51 (diluted 1:3 with water) or ARDEX P60. Apply evenly with a bristle push broom. Allow to dry to a thin, clear film.

### Very Absorbent Substrates

Apply 2 coats of diluted P51 primer or P60. Allow each coat to dry sufficiently before proceeding.

### High Strength/Dense/Non-Porous Substrates

Use a solvent-free (R2PE) or water-based (WPM300) epoxy primer and blind with sand (~ 0.5 – 1mm). Allow each primer to cure to a hard film (24 hours) before proceeding. Once cured, sweep the surface with a stiff bristle push broom and then thoroughly vacuum to remove all loose sand before application of leveler.

Do NOT install Levelling Compounds until the primer has thoroughly dried or cured.

Refer to the relevant product datasheet for specific instructions in relation to each primer.

### MIXING RATIO

Approximate 6L of clean water per 25kg bag of ARDEX CL 1.

The water mixing ratio might be affected by environment & site conditions as well as mixing devices. Please always conduct a flow ability test to determine whether the water mixing ratio should be slightly adjusted before application of large areas.

### MIXING

ARDEX floor levelling products react and harden quickly when mixed with water. Thorough mixing with a heavy duty electric drill fitted with an Ardex mixing paddle in the shortest possible time is essential.

Always mix the powder into the water.

The normal mixing time for a 25kg bag is 1.5 - 2 minutes.

Concrete or screed mixers, paint mixers, spiral mixers and hand mixing are not suitable.

### INSTALLATION

ARDEX CL 1 can be applied in temperature ranges (substrate & atmospheric) from 10° - 35°C. ARDEX CL 1 has a flow time of approx. 15 minutes at 23°C. At lower temperatures this time is extended and at higher temperatures this time is shortened.

Work to an area that suits the size of the installation team such that fresh mortar is poured into workable mortar, which can then be spread, gauged and troweled within the flow time of the material. Pour the mixed CL 1 material onto the prepared & primed substrate and then spread into place using appropriate tools. Rake the material to gauge the thickness if required and then smooth the surface with a flat trowel if required.

The use of a spiked roller may aid the final levelling of the material, but is not normally necessary. If used, the spiked roller should be used within the flow time of the product and limited to a maximum of 2 passes.

Studded shoes should be worn when walking in the fresh mortar to avoid leaving marks.

### APPLICATION THICKNESS

#### General

ARDEX CL 1 can be applied from 2–6mm in one application.

### CURING & DRYING TIMES

#### Walkability

Allow approximately 4 hours at 23°C before foot traffic.

#### Application of Floor Coverings

Floor coverings can be applied onto the cured CL 1 after 48 hours with 3mm at 23°C.

In cases where the product has been bulked-out with aggregate, allow an extra 24 hours curing for each 4mm of thickness above 8mm. Refer to the relevant product datasheet or Manufacturer's instructions for specific application and usage details in the relation to the chosen floor covering.

#### Full Cure

ARDEX CL 1 will gain sufficient strength after 48 hours to allow access for the commencement of finishing or light traffic activity.

Allow 7 days curing at 23°C before subjecting the material to full service conditions.

Note: - higher temperatures may reduce curing & drying times, whilst lower temperatures will extend the drying time.

### CLEAN-UP

Clean all tools, equipment, hands, etc with water immediately after use. Hardened material will have to be removed using mechanical means.

### COVERAGE

A 25kg bag will cover approximately 5m<sup>2</sup> at 3mm thickness – assuming a flat surface.

### PACKAGING

25kg multi-layer paper bags incorporating a poly liner.

The technical details, recommendations and other information contained in this datasheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable National or Local Standard, our instructions & recommendations, and only for the uses they are intended. Regional specific recommendations, standards, codes of practice, building regulations or industry guidelines may affect specific installation recommendations. Our Company policy is one of continuous Research & Development; we therefore reserve the right to update this information at any time without prior notice. We guarantee the consistent high quality of our products; however, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof. The supply of our products and services is also subject to certain terms, warranties & exclusions; these details will be made available to you on request. You should make yourself familiar with them.

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## Self-Leveling Underlayment

### STORAGE & SHELF LIFE

ARDEX CL 1 has a shelf life of approximately 6 months if stored in dry conditions in the original un-opened packaging.

### TECHNICAL DATA

#### In Accordance with ARDEX Quality Standards

Flow Time (23°C):	approx. 15-35 minutes
Walkability (23°C):	approx. 4 hours
Application Thickness:	2 – 6mm

#### In Accordance with Chinese National Standard:- JC/T985-2017

##### Flow

Initial:	> 135mm
After 20 minutes:	> 130mm

##### Compressive Strength

After 28 days:	≥20 MPa
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##### Flexural Strength

After 28 days:	≥ 4 MPa
Adhesion Strength:	approx. 1.0 MPa
Shrinkage:	≤ 0.15% %

### HEALTH & SAFETY

ARDEX CL 1 is considered non-hazardous in normal usage; however it contains Portland cement & quartz sand and reacts alkaline which may cause some skin irritation after prolonged contact. Avoid generation and breathing of dust. Avoid contact with eyes or skin. Wear suitable protective dust mask, gloves and safety glasses. In case of contact with eyes, rinse for several minutes under running water. In case of contact with skin, rinse with running water. If dust is inhaled, remove to fresh air, ensure breathing passages are clear and rinse mouth with water. In the case of adverse symptoms, seek medical advice.

Physiologically and ecologically safe when in the cured state.

For further information, please consult the Material Safety Data Sheet (MSDS).

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