ARDEX MC Rapid

One Coat Moisture Control System

One-coat epoxy resin system

Solvent free, alkali resistant

Reduces vapour emissions to below maximum acceptable levels for floor coverings

For RH readings up to 98% and pH 14

Use under all standard commercial and residential floor coverings on interior substrates only

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One Coat Moisture Control System

DESCRIPTION

The ARDEX MC RAPID Moisture Control System is a one-coat, 100% solids epoxy moisture management system formulated to suppress excessive moisture vapour emissions in new or existing concrete prior to installing an ARDEX underlayment with flooring. It is especially suited to treat areas of new concrete in critical installations, such as health care and institutional applications where the construction schedule does not allow adequate drying of the concrete. ARDEX MC RAPID is also recommended over existing concrete where the level of moisture emissions from the slab exceeds the maximum allowed by the manufacturer of the finished floor covering. Designed specifically for fast-track installations.

The ARDEX MC RAPID system is based on a reactive epoxy that produces a hard surface and tenaciously bonds to the substrate. Once cured, ARDEX MC RAPID is able to reduce high levels of moisture emissions to an acceptable level, even over new concrete that is only 7 days old.

MOISTURE TESTING

Prior to beginning the installation, measure the relative humidity within the concrete in accordance with using AS1884-2021. When installed in accordance with our written recommendations, ARDEX MC RAPID is suitable for moisture levels up to 98% RH at 40% depth of concrete level. Please note that very high RH levels (above 98%) could be indicative of external water infiltration from inadequate drainage, leaks, broken pipes, etc. Verify that all external sources of water are controlled sufficiently prior to installation. The surface of the concrete must be completely dry at the time the ARDEX MC RAPID is installed. For RH levels above 98%, verify concrete surface dryness by mat testing in conformance with ASTM D4263. The test must be conducted for at least 4 hours, which is the time required for ARDEX MC RAPID to be set sufficiently. To ensure that condensation does not form, it is extremely important to check the surface temperature of the concrete just prior to installation to verify that this temperature is at least 3°C higher than the dew point for the given temperature and humidity in the space and rising. For example, if the dew point temperature in the space is 16°C, the slab temperature must be 19°C or higher and rising.

SURFACE PREPARATION

All concrete substrates must be structurally sound and solid, surface dry and thoroughly clean and free of oil, wax, grease, asphalt, paint, latex compounds, curing and sealing compounds and any contaminant that could act as a bond breaker. The concrete must have a minimum tensile strength of 1.5MPa (1.5N/mm^2) when tested in accordance with ASTM C1583.

Mechanical preparation of the surface is required to obtain a minimum ICRI concrete surface profile of 3 (CSP 3). Substrate preparation must be by mechanical means, such as shot blasting. Broom sweep and vacuum the prepared surface. Acid etching, solvents, sweeping compounds, adhesive removers and sanding are not acceptable means of cleaning the substrate.

If the concrete substrate is too uneven to provide a uniform film thickness of the ARDEX MC RAPID (typically CSP 6 or higher), the substrate can be pre-smoothed using ARDEX K 301 Levelling and Smoothing Compound. Please refer to the appropriate ARDEX technical brochure for installation instructions and necessary cure times.

RECOMMENDED TOOLS

Epoxy mixing paddle, low speed drill, short-nap paint roller or notched squeegee (smoother surfaces), long-nap paint roller (more uneven surfaces) and a paintbrush.

DORMANT CRACKS AND DORMANT SAW CUT JOINTS

To achieve a continuous moisture barrier, ARDEX recommends the use of a two-part, low viscosity, 100% solids, rigid crack and joint filler, such as ARDEX RA 56, to fill small, non-moving cracks and non-moving saw cuts in existing concrete substrates. Cracks greater than a hairline in width 0.8mm and saw cuts must be filled in strict accordance with the installation instructions provided by the ARDEX Technical Service Department. Once the dormant cracks and dormant saw cuts have been filled properly, broadcast sand to cover all areas and allow this to cure thoroughly prior to proceeding with the ARDEX MC RAPID installation.

MOVING JOINTS AND MOVING CRACKS

All moving joints and moving cracks must be continued up through the ARDEX MC RAPID, the ARDEX underlayment and the floor covering by installing a fully flexible sealing compound designed specifically for use in moving joints, such as ARDEX RA 54. ARDEX cannot be responsible for issues arising from expansion and isolation joints, saw cuts or new or existing cracks that may develop, widen or become more narrow after the system has been installed. For questions regarding the appropriateness of specific joint treatment compounds, please contact the ARDEX Technical Service Department.

MIXING AND APPLICATION

Each individual unit of ARDEX MC RAPID comes in a 10kg unit containing separate, pre-measured quantities of hardener (Part B) and resin (Part A). After opening each container, stir the individual components thoroughly before blending. The hardening agent (Part B) is added to the resin (Part A). Pour all of the hardener into the resin portion, and mix 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, mix for 10 seconds, and then pour all of the contents back into the resin container. Mix for an additional 30 seconds before applying.

Apply the freshly mixed ARDEX MC RAPID to the prepared concrete surface in a uniform direction at a minimum application rate of 16m² per unit (approx. 350 microns). Use a short-nap paint roller or notched squeegee with back-rolling for smoother surfaces, and a longer nap roller for more uneven substrates. To minimise the potential for pinhole formation, work the ARDEX MC RAPID into the surface with the roller to ensure maximum penetration. ARDEX MC RAPID can also be worked into the surface with a paintbrush for hard to reach areas and corners. While the ARDEX MC RAPID is still in a fresh state (maximum 20 minutes), broadcast an excess of fine hard grain quartz sand 0.6mm-0.8mm consistently over the entire area. When broadcasting the sand, use a NIOSH- approved dust mask in conformance with OSHA requirements regarding the handling of sand (crystalline silica). Sand must be clean and dry. Do not stand or walk on the freshly applied epoxy when broadcasting the sand. Once an area has been covered completely with sand, the surface of the sand can be walked on, so long as care is taken not to expose or disturb the epoxy. Use approximately 5kg of sand per sq. metre of area. Once the sand broadcast is complete, avoid all general traffic over the surface for a minimum of 4 hours.

After 4 hours, broom sweep and vacuum the surface to remove all loose sand. The clean, prepared surface of the sand is the priming system for the ARDEX underlayment or topping. No additional priming is required. There is no limit to how long the sanded surface can remain open before installing the ARDEX underlayment or topping provided that the surface does not become contaminated.

If the underlayment or topping will not be installed immediately, protect its surface from construction traffic, dirt and debris using Masonite or similar. Install the ARDEX underlayment or topping in accordance with the instructions found in the corresponding ARDEX technical data sheet.

NOTES

ARDEX MC RAPID has a working time of approximately 20 minutes at 21°C. Lower temperatures will lengthen the working time, while higher temperatures will shorten it dramatically. Do not apply ARDEX MC RAPID if the surface temperature is below 10°C. Once the ARDEX MC RAPID is mixed thoroughly, use it immediately and without interruption. Due to its high reactivity, this epoxy has a tendency toward intense heat buildup, especially when left in the original container. If this occurs, do not touch the container. Close the lid loosely and transport the container by the handle to a cool room or outdoors until it sets and cools.

TECHNICAL DATA

All data based on 21°C installation temperatures.

Mixing Ratio:	Add entire pre-measured contents of Part B (hardener) into Part A (resin).
Coverage on CSP 3 Prepared Concrete:	Max. 16m² per mixed unit of ARDEX MC RAPID (Will vary with surface profile)
Permeability (ASTM E96):	1 coat at 0.06 perms or 250µm 2 coats, each at 0.25mm or 250µm with sand in 2nd
Effect of 14pH Solution (ASTM D1308):	No effect
Working Time:	20 minutes
Pot LIfe:	20 minutes
Walkable:	4 hours
Install underlayment:	Min. 4 hours
VOC:	19.9 g/L A + B, ASTM D2369
Packaging:	10kg unit
Storage:	Store in a cool dry area. Do not leave containers exposed to sun. Keep from freezing. Keep away from heat.
Shelf Life:	1 year, if unopened

GUARANTEE

ARDEX New Zealand Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX New Zealand Ltd, 15 Alfred Street, Onehunga, Auckland 1062; Toll Free: 0800 227 339; and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage.

Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the New Zealand Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the New Zealand Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss of damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

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