



TECHNICAL BULLETIN – TB022.005

ARDEX SELF-LEVELLING CEMENTS - EXTREME WEATHER CONDITIONS

2nd October 2024

INTRODUCTION & SCOPE

Throughout the year, we experience many climatic changes, from snow, ice, and sleet in our Southern States to heat waves, high humidity, and monsoonal rains in our Northern States.

The installation procedures for floor leveling cement and floor coverings must be constantly monitored and modified to suit these climatic changes.

THE PROBLEMS

Cold weather will dramatically slow the setting and drying times of floor levelling cement, resulting in an extended waiting time before floor coverings can be laid. Extremely cold conditions combined with overwatering self-levelling cement can result in permanent damage or non-curing of the cement underlayment.

Hot weather will dramatically speed up the setting and drying times of floor-levelling cement. Working times will be shortened, and flow properties will be reduced. Hot air blowing over freshly laid cement will result in rapid moisture loss, with the risk of cracks appearing. Over-watering intended to “assist” with working times can result in weakening and poor hardness in the cement underlayment.

SOLUTIONS

COLD WEATHER

Plan the installation of floor levelling cements and floor coverings at a room temperature that will allow proper installation and meet job schedule timelines

- 1) Deliver material in original unopened packaging.
- 2) Protect from freezing, moisture and direct sunlight.
- 3) DON'T INSTALL smoothing cement over a cold subfloor that is BELOW 10°C
- 4) REMEMBER the smoothing cement will very quickly equilibrate to the temperature of the subfloor.
- 5) INCREASE THE AMBIENT TEMPERATURE of the work area to ensure the subfloor temperature exceeds 10°C – this may take 2 – 3 days or more. (Refer to A.S. 1884-2012 4.1 *CONDITIONING OF FLOOR COVERING AND SUBFLOOR – “ambient room temperature range of 15°C to 28°C”*).
- 6) REDUCE THE MIXING WATER to the minimum allowed where a product has a range. For example, ARDEX K15 has a range of 4.5-5 litres per 20kg bag, so 4.5 - 4.8 litres of water would be recommended.

When laying floor coverings, cold subfloor and ambient temperatures will extend the drying time of smoothing cements. Wait until the product is fully dry before installing floor coverings. For



example, at 10°C ambient temperature, ARDEX K15 will require a minimum 36-hour drying time rather than 18 hours as would be normal for ~200C.

HOT WEATHER

AS1884-2012 says:

4.1.2 Air-conditioned areas

Where air conditioning is installed, no underlay or floor covering shall be laid on the subfloor until the conditioning units have been in operation at the expected operating temperature and humidity for at least 7 days.

Plan the installation of floor levelling cements in the coolest part of the day and follow the basic steps below:

1. Deliver materials in their original unopened packages and protect them from direct sun exposure and exposure to moisture.
2. **DON'T INSTALL SMOOTHING CEMENTS OVER A HOT SUBFLOOR.** Remember the smoothing cement will very quickly equilibrate to the temperature of the sub-floor.
3. Avoid direct sunlight, excessive heat, or draughts on the smoothing cement once laid.
4. **COOL DOWN THE MIXING WATER BY ADDING ICE TO THE MIXING WATER.** (Allow ice to melt before mixing with smoothing cement)
5. Install a test area to determine the product's suitability for the site conditions.

For further information on the effects of weather on ARDEX products, refer to ARDEX Technical Bulletin TB097.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition, specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations, contact your nearest Ardex Australia Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

REASON FOR REVISION-ISSUER

Change of slogan and address

DOCUMENT REVIEW REQUIRED

36 months or whenever third-party suppliers change their recommendations.

Australia: 1300 788 780

New Zealand: 643 384 3029

Web: www.ardexaustralia.com

email: technical.services@ardexaustralia.com

Address: 2 Buda Way, Kemps Creek NSW 2178