

TECHNICAL BULLETIN

HEATED CONCRETE and FLOOR LEVELLING SYSTEMS

INTRODUCTION

In recent years subfloor heating has become more popular as a climate control medium for occupied spaces throughout Australia. Installing flooring over such systems requires more thought and preparation than standard flooring installations. All components utilised need to accommodate the thermal variations associated with the heat source. The considerable and varied forces as well as thermal movement associated with heated subfloors often place significant stress on individual components of the overall system.

Floor heating has traditionally been placed using heating elements into a sand/cement screed or the concrete substrate itself. Such methods require long curing times, raising levels and adding considerable weight.

Adjuvate LevelRite HF requires only 5mm of product over subfloors with heating installed within the slab and is generally suitable for the following coverings;

Vinyl tile and sheet, carpet, floating timber, tiles and rubber matting.

PRECAUTIONS

To provide additional protection when installing floor-levelling cement over pre-existing heated subfloors we recommend the following procedures:

- Heating source must be disconnected and substrate allowed to cool to ambient temperature. To install Levelrite HF subfloor must be between 12 - 20°C.
- Subfloor shall be inspected and corrected for moisture in accordance with AS 1884-2012 or AS2455-2007, or any other conditions that may affect the performance of the underlayment or finished floor covering. Warm water leaks from embedded pipes will likely result in damage to the levelling compound or subsequent floor covering.
- All expansion joints in the substrate must be expressed through the levelling compound and finished floor.
- Subfloor must be correctly prepared, heated subfloors are high stress applications; poor preparation and/or contamination can compromise adhesion.
- Concrete subfloors must provide a mechanical key for the underlayment topping application. Diamond grinding, shot-blasting or scarifying the surface to provide a roughened, clean, sound, solid, and porous matrix is required.
- The above surface must be primed with an appropriate approved primer such as Adjuvate LevelPrime. Follow priming instructions carefully as too much primer can detrimentally affect topping adhesion. Apply a consistent coat with a soft push broom. Ensure even coverage and remove all puddles and excess primer. Allow to dry to a clear, thin film. Do not apply topping until primer is dry but always within 24 hours.
- Allow topping to cure at least 48 hours at 20°C before installing final floor covering.
- Whilst electric matrix elements can be utilised, water filled pipes cannot be placed into thin-set toppings as adhesion and cracking issues will occur.
- Resultant subfloor moisture levels must be measured to ensure compliance with floorcovering manufacturers specifications.
- Appropriate curing times for the entire system must be observed prior to recommissioning the heating system. In general it is best to allow 7 days before starting the heating unit.
- Once the heat source is initiated the temperature should not be increased by more than 2°C per day to a maximum of 25°C.
- When subsequently installing tiles to the surface utilise conventional tiling practices and allow expansion joints at 4m centres and at all vertical abutments, in accordance with Australian Standards AS 3958.1-2007.