

Technical Bulletin – Sadlerstone Sub-Floor Heating Installations

Follow these procedures when installing Sadlerstone tiles over sub-floor heating:

- 1 Provide your project engineer (or heating engineer) with details of the technical characteristics of Sadlerstone tiles and tile dimensions. It is the responsibility of the project engineer to determine the suitability of our tile for your particular installation and draw up a specification. The engineer may, for example, recommend extensive conditioning of the substrate prior to the tile installation – this may include activating the heating several times over an extended period.
- 2 In cases where sub-floor heating may continue to cause significant expansion or other movement in the substrate it may be necessary to use systems which allow some degree of independent movement between the tiles and the substrate.
- 3 Only install heating systems with in-floor thermostats (not air sensors). Heating output should not exceed 170 watts per square metre. Set points should be between 20 to 27 degrees Celsius (approx 70 to 80 degrees Fahrenheit), with a 5 degree Celsius (approx 9F) maximum fluctuation.
- 4 Ensure that the substrate is adequately prepared, clean, dry and flat. The correct adhesive should be chosen according to the size and thickness of the tile, the installation conditions and the final usage of the installation. Contact your Mapei adhesive specialist and seek advice on the most suitable adhesive, grout joint widths and expansion/control joints to use to fulfill the engineer's requirements. Install the tiles according to procedures outlined in Sadlerstone technical literature, in combination with the additional procedures recommended by the engineer and adhesive specialist.

Depending on type of heating system, allow a minimum of 4 to 8 weeks after installation before activating heating for the first time.

- 5 It is generally recommended to use one load class (thickness) higher when sub-floor heating is specified (e.g. 20mm cf 15mm).
- 6 After tiles are installed, follow the engineer's specification for activating sub-floor heating. By way of example, the following recommendation was taken from a recent specification: "Allow 4 weeks or longer from completion of tile installation before activating heating for the first time. When turning on heating for the first time (or after a period when the heating has been turned off), set the heater's thermostat to two degrees above the overnight lowest floor temperature. Repeat this every day, increasing the thermostat temperature by two degrees Celsius until the optimum temperature is reached. Optimum temperature should not exceed 27 degrees Celsius (approx 80F).

As an example, if the initial low was 10 degrees Celsius (50F), then it would take 6 days to reach a temperature of 22 degrees (approx 72F)."

- 6 Do not expose the installation to fluctuations in temperature from the sub-floor heating. Protect new installations from full sun and fluctuations in ambient temperatures from hot air and wind etc.
- 7 Never allow water to pond on the surface of the tiles. Do not flood the floor with water when cleaning – use only a slightly damp mop.

For cleaning, sealing and maintenance procedures, please refer to the guide: "Installation, Finishing & Care / Smooth tiles". This is available upon request or can be downloaded from our website at sadlerstone.com.