

Screed installation in cold conditions requires careful consideration and adherence to specific guidelines to ensure optimum performance and durability. It is important to be aware of the challenges that the winter months can bring, from freezing temperatures, slower drying times, high humidity and rainwater. This guide outlines some essential points to ensure FLOWPLUS is installed successfully in cold weather.

## Temperature Requirements:

Ensure that the substrate and ambient air temperature remain within the range of +5°C to +30°C during installation in accordance with European standards (EN8204 Part 7:2003 Section 7.2.2). If possible, monitor the weather and schedule screeding during milder conditions when the risk of freezing is lower.

- ✚ **Substrate and screed temperature:** Fresh screed should not be laid on a frozen substrate and the screed temperature on delivery should not be less than 5°C. The screed temperature should be maintained above 5°C for 4 to 5 days after installation, by which time the screed should have achieved sufficient strength to resist frost damage.
- ✚ **Air temperature:** Do not lay the screed in ambient air temperatures below 5°C on a falling thermometer or below 3°C on a rising thermometer. The below table shows the minimum temperature of the screed mortar given the differences in air temperature:

| Air temperature | Minimum temperature of screed mortar            |
|-----------------|---|
| +5°C to -3°C    | +5°C in general                                 |
|                 | +10°C at cement content < 240 kg/m <sup>3</sup> |
| Below -3°C      | ≥ +10°C which must be maintained for 3 days     |

## Drying Times:

Be sure to allow for extended drying and strength development times, and communicate this to your customer, as cold weather slows down the chemical reactions necessary for cement to set.

- ✚ **Pre-conditioning materials:** Store and preheat materials such as sand and water before mixing. Cold materials can reduce the overall temperature of the screed mix, so it is important to ensure that all components are at an appropriate temperature before mixing.
- ✚ **Protect from freezing:** Freshly laid screed can be protected with tarpaulins, sheeting or thermal blankets which are supported clear of the surface in a way to stop draughts underneath.
- ✚ **Temperature monitoring:** Continuously monitor the temperature of the screed throughout the curing period. Regular checks will help identify any deviations from the desired temperature range, allowing timely adjustments to be made to maintain optimum conditions.

With a little extra planning and care, FLOWPLUS screed can be installed successfully even in cold conditions. Focus on keeping materials dry, maintaining temperatures, adjusting schedules as necessary and keeping your customers informed. As always, let us know if you have any specific questions.