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SpecTech
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Cold Weather Grouting & Repair

Cold temperatures delay set time and strength development of cementitious products and repair mortars. Cementitious grout and repair mortars, like concrete, must be allowed to attain a “green strength” before being subjected to freezing temperatures. The following guidelines may help compensate for cold temperature placement.

- Materials should be pre-conditioned/stored as necessary so that the mixed product is between 40°F and 80°F (4°C and 27°C). Due to the mass of palletized (bagged) material, up to 24 – 48 hours of pre-conditioning may be required. Store product in an indoor or a tarped and heated area when required.

- All surfaces in contact with grout or repair mortar should be preconditioned and maintained at a temperature between 35°F and 90°F (2°C and 32°C) for 8 – 24 hours to remove any frost from the substrate. Presoaking the substrate with hot water (90°F) may aid in raising concrete surface temperatures. Make sure the water used for presoaking does not freeze on concrete surfaces.

- Heating shall be accomplished by indirect exposure – do not blow heat directly on to newly placed grout or repair mortar surfaces. Heated enclosures should be windproof and weatherproof as much as possible. Combustion heaters must be vented and shall not be permitted to heat and dry the product directly. Caution: Exhaust gases may contaminate or cause carbonation within the enclosed environment.

- Use warm or hot water to mix the products. Whenever possible use the least amount of water to allow proper placement. This will allow the product to achieve higher strengths more quickly, reducing the window for potential freeze damage.

- Once placed, the grout/repair mortar temperature must be maintained above 35°F (2°C) until the product reaches a minimum of 1000 psi (6.9 MPa) or the required strength. Applications subjected to multiple or severe freeze thaw exposure should be allowed to achieve a minimum of 3,000 psi prior to experiencing freezing temperatures. In general, SpecChem’s Grouts and Repair Mortars should be protected from freezing for a minimum of 24 hours when placed at temperatures of 35°F. Rapid setting and rapid hardening products like RepCon 928 will require less time under protection due to its high early strength gain.

- Once the product has attained a minimum of 1000 psi in compressive strength, gradually reduce temperature of grout to ambient temperature to avoid thermal shock.

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