Technical Bulletin 103

Precision EPOXY Grouts
Cold Weather Grouting

Cold temperatures delay set time and strength development and decrease flowability of epoxy grouts. Installing epoxy grouts below 60°F (16°C) is not recommended unless the following guidelines are adhered to.

A. Environmental Conditioning

1. Temperature is a critical factor in the installation of epoxy grouts. The temperature of the environment and the materials being used must be controlled throughout the installation and curing process using heaters, tenting, insulating materials, etc. as required.
2. Heating shall be accomplished by indirect exposure (radiant heat recommended). Do **NOT** blow heat directly onto newly placed grout surfaces. Heated enclosures must be windproof and weatherproof.
   Caution: Combustion heaters must be vented. Exhaust gases within the enclosed environment may create a health and safety hazard.

B. Pre-Placement Conditioning

1. All epoxy components, mixing, and testing equipment should be preconditioned/stored as necessary, so the mixed grout is between 70ºF and 90ºF (21ºC and 32ºC). Due to the mass of palletized (bagged) material, up to 72 hours of preconditioning may be required. Store all components in a dry, heated, indoor or tarped area when required.
2. All surfaces in contact with the epoxy grout should be preconditioned and maintained at a temperature between 60ºF and 95ºF (16ºC and 35ºC) for 8 - 24 hours immediately prior to placement.

C. Post-Placement

1. Installed epoxy grout temperature should be maintained between 50°F and 90°F (10°C and 32°C). Maintain environmental conditioning and protect the epoxy grout from damage until it reaches its required compressive strength. Curing epoxy grout at cold temperatures will delay strength development.
2. Field test samples, as needed, should be maintained at the same installation temperature conditions to monitor strength development.
3. Gradually allow temperatures to cool to ambient to avoid thermal shock.
4. In-service operation may begin immediately after the required epoxy grout compressive strength has been reached.

For additional information, contact your Five Star® Technical Sales Representative.

Five Star Products follows standard industry practices. For more information, refer to PIP/API RP 686 *Process Industry Practices*; ACI 351.5-15 *Specification for Installation of Epoxy Grout Between Foundations and Equipment Bases*; ASTM C579-18 *Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes*

FIVE STAR

FIVE STAR PRODUCTS, INC.
2 Enterprise Drive • Suite 303
Shelton, CT 06484 USA
Phone: +1 203-336-7900

Build on our strength