CTU Online Anytime Module 3.2 – Cement Grouts

Key Takeaways

- Sand, cement and iron oxide pigments were the original components of grout.
- Over time, liquid latex admixtures were added to improve strength, color retention and water absorption.
    - Because of variation in site mixing, performance was inconsistent
    - Spray-dried polymers are now added to grout formulas in the factory to improve consistency
- Cement grouts fall into two categories, ANSI A118.6 and A118.7
- ANSI A118.6 is the classification for Standard Performance Cement Grout
    - Custom Building Products' PolyBlend® Sanded Grout meets A118.6
        - Creates hard, dense joints
        - Grout joints from ⅛" – ½"
        - Suitable for submerged tile
    - PolyBlend® Non-Sanded Grout is ideal for joints less than ⅛" as well as glass, polished stone or other easily scratched tile. It has a durable, non-shrinking formula and meets ANSI A118.6.
    - Portland cement grouts take time to hydrate, are subject to site conditions and are affected by tile porosity. As a result, they can experience the following challenges:
        - Color changes
        - Shading
        - Mottling
        - Weak or powdery joints
        - Efflorescence
    - Efflorescence is a byproduct of Portland cement and occurs as the cement hydrates
- A higher performing class of grouts has been developed to address efflorescence and other issues. These High Performance Cement Grouts meet the performance criteria set forth in ANSI A118.7.
    - Custom Building Products uses calcium aluminate cement in its Prism® Ultimate Performance Grout to prevent problems such as efflorescence. Prism meets ANSI A118.7.
        - Prism® will hydrate faster than Portland cement grouts, eliminating efflorescence
        - Prism® is uniform in color, stain resistant and good for joints from 1/16" to ½" wide
        - Prism® uses CustomLite® lightweight technology that is easy to spread and easy to clean
- ANSI A118.6 Standard Grout and A118.7 High Performance Grout Comparison:
    - Water absorption: A118.6 < 10% vs. A118.7 < 5%
    - Tensile strength: A118.6 > 300psi vs. A118.7 > 500psi

    - Flexural strength: A118.6 > 500psi vs. A118.7 > 1000psi
- The benefits of an A118.7 high performance cement grout versus an A118.6 standard cement grout are:
    - Less efflorescence
    - Better color consistency
    - Higher strength
    - More stain resistant
    - Rapid setting
    - Rapid binding
- When selecting a cement grout, the potential costs associated with a lower performing grout should be factored into the job.