

## CTU Online Anytime Module 3.2 – Cement Grouts

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### 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 1/8" – 1/2"
    - Suitable for submerged tile
  - PolyBlend® Non-Sanded Grout is ideal for joints less than 1/8" 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 1/2" 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
- New Polyblend® Plus Sanded Grout also meets A118.7 performance standards to provide an additional option when specifying cement grout.
- When selecting a cement grout, the potential costs associated with a lower performing grout should be factored into the job.

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