PRODUCT DATA SHEET

PETRA UHPC

Ultra-High Performance Self-Consolidating Fiber-Reinforced Concrete System

1. Product Description

UHPC panels deliver exceptional durability, strength, and architectural flexibility for modern building envelopes. Manufactured using Portland cement, high-performance aggregates, proprietary additives, and alkali-resistant glass fibers, these advanced concrete panels provide a superior solution for both exterior and interior cladding applications.

Designed to integrate seamlessly with a wide range of façade systems, UHPC panels offer outstanding resistance to environmental exposure while maintaining a sleek architectural appearance. Their high strength-to-weight ratio allows for thinner, lighter panels without compromising structural integrity or performance.

From new construction to building retrofits and re-cladding projects, UHPC panels provide architects and designers with versatile design options including standard colors, custom finishes and unique surface textures. Panels Supplied cut to size with cast in insert installation, reducing labor cost

1.1 Key Features

- High strength-to-weight ratio
- Non-combustible, Class A fire rating
- Impermeable with resistance to chloride penetration and carbonation
- Superior freeze-thaw durability
- Impact resistance exceeding ASTM 1629 highest rating
- Standard graffiti-resistant sealer available
- Standard colors and textures available
- Custom colors, and surface textures available upon request
- Optional opaque stain for uniform appearance

2. Technical information

- **Compressive strength**:
  Tested according to CSA A23.2-9c
  4 Days Strength: > **80 Mpa**
  28 Days Strength: > **120 Mpa**
- **Flexural Strength:**
  Tested according to ASTM C 1185 **> 15 Mpa**
- **Shrinkage:**
  Tested according to CSA A23 2-21
  7 Days: **0.017%**
  Days: **0.025%**
- **Chemical Resistance:**
  Chloride Ion Permeability ASTM C1202 < 100 Coulombs
- **Freeze-thaw Resistance:**
  ASTM C666 - Standard Test Method for resistance of concrete to rapid freezing and thawing:
  Procedure A350 cycles Durability Factor > 99%
- **Modulus of Elasticity:**
  Testing According to ASTM C469 > 45000 Mpa
- **Non-combustible:**
  Testing According to CAN/ULC 114:2018 (R2024), Complies.