



OTB Materials - TechCement™

A full or partial replacement for portland cement

Technical Data Sheet

DESCRIPTION

BASIC USES: TechCement™ can be used as a full or partial replacement for portland cement in ready-mix and precast products including:

- Precast concrete/tilt wall
- Ornamental precast stone and pavers
- Roadway bridges and pavements
- Residential foundations and driveways
- Water collection and treatment facilities
- Marine applications (seawalls, docks and wave abatement)
- 3-D printing

TechCement™ is typically used as a replacement for Ordinary Portland Cement (OPC) or in substitution for High Performance Concrete (HPC and UHPC). It can also be used to replace Glass Fiber Reinforced Concrete (GFRC). TechCement™ geopolymer provides a dense matrix, greatly reducing permeability and creating greater resistance to scaling induced by freeze/thaw conditions. TechCement™ can be used in concrete exposed to highly aggressive sulfate environments. TechCement™ develops higher strength at early ages when compared with a portland cement concrete. It is effectively used in precast or prestressed concrete, where early strength gain and quick form turnaround are desired.

Applicable Standards: The following standards apply to the use of TechCement™: Performance-based specifications ASTM C39, C78, C496, C882, C666A, C672, C469, C157 AASHTO T336. TechCement™ also meets the optional physical requirements of ASTM C150 and AASHTO M85..

Availability: TechCement™ is available in full tanker transports, bulk Super Sacks, and 50-60 lb. bags. TechCement™ can be ordered by contacting OTBM Sales at sales@OTBMaterials.com.

Sustainability: The manufacture of TechCement™ produces 65% less CO₂ than the manufacture of portland cement. Additionally, TechCement™ uses 1/3 to 1/2 the water used in the production of portland cement.

TechCement™ Features and Benefits:

- High-Early Strength
- Accelerates Mold Cycle Time
- Increased Acid Resistance
- Higher Heat Resistance
- Low Permeability
- Decreased Water Usage
- Decreased CO₂ Emissions

Measure	TechCement	Portland
Time to 2000 PSI	2-6 Hours	4-8 Hours
Max Compressive Strength	Upto 25,000	Upto 25,000
Time to Full Strength	14 days	28 days
High Resistance to Acids	Yes	No
Low Permeability	Yes	No
CO ₂ Created per Ton	0.35 of a Ton	1.0 Ton

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