OTB Materials – Formula 16™ Sulfur concrete to replace portland cement

Technical Data Sheet

DESCRIPTION

BASIC USES: Formula16™ is used in concrete, precast, and masonry products for a multitude of construction projects including:

- Precast concrete/tilt wall
- Ornamental precast stone
- Roadway and pavements
- Residential foundations and driveways

- Water collection and treatment facilities
- Marine applications (seawalls, docks and wave abatement)
- Encapsulation of hazardous wastes
- High sulfate and acidic environments

Formula 16TM is best suited for applications at or below grade, or in structures not requiring a high temperature tolerance (above 225°F). Formula 16^{TM} is not susceptible to scaling from freeze/thaw as it is an impermeable material incapable of entraining liquids or gases. Formula 16^{TM} cement can be used in concrete exposed to highly aggressive sulfate and acidic environments. Formula 16^{TM} develops higher strength at early ages when compared with a portland cement. It is effectively used in precast or prestressed concrete, where early strength gain and quick form turnaround are desired.

Formula 16TM facilities produce Sulfur cements that meet or exceed the optional physical requirements of ASTM C150 and AASHTO M85. Due to the physical characteristics of Formula 16^{TM} , air entrainment is not necessary to prevent deterioration caused by freeze/thaw cycles. Formula 16^{TM} comes as a thermoplastic pellet containing microaggregates. The product is melted and blended with conventional aggregates at 350° F to form sulfur concrete products.

Applicable Standards: The following standards apply to the use of Formula 16[™] sulfur cement: Performance-based specifications ASTM C39, C78, C496, C882, C666A, C672, C469, C157 AASHTO T336. Formula 16[™] can be designed to meet the physical performance requirements of portland cement concrete, but may not precisely address current OPC specifications.

Availability: Formula 16TM cement is available in full tanker transports or bulk Super Sacks. Formula 16^{TM} can be ordered by contacting Formula 16^{TM} Sales at <u>info@OTBMaterials.com</u>.

Sustainability: The manufacture of Formula 16^{TM} produces up to 95% less CO₂ than the manufacture of portland cement. Additionally, Formula 16^{TM} has a 100% reduction in water usage during production versus portland cement.

Formula 16™ Features and Benefits:

Rapid Setting

- Accelerates Mold Cycle Time
- Achieves Full Strength in 24 Hours
- Salt Water Resistant
- Water & Vapor Impermeable
- High Resistance to Acid
- Up to 95% Reduction in CO₂ Emissions
- 100% Reduction in Water Usage

Measure	Formula 16™	Portland
Time to 2000 PSI	2 Hour	4-8 Hours
Max Compressive Strength	8000	Upto 25,000
Time to Full Strength	24 Hrs	28 days
High Resistance to Acids	Yes	No
Low Permeablitiy	Yes	No
CO ₂ Created per Ton	.05 of a Ton	1.0 Ton

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