CheMix

Space-Age Materials

Star Polymers

CheMix

Product Description

CheMix is a single ingredient liquid that cures into a solid with extraordinary strength and hardness. The chemistry can be formulated to suit a variety of characteristics to fit many practical applications in construction, consumer products and more



ChemMix
A VERSATILE Building Material

CheMix can be customized to fit specific job requirements using following factors :

- **Extreme Strength**
  - stronger and harder than concrete - ranging from 20,000 to 350,000 psi
  - Can be formulated to extreme levels for bullet-proof and blast rated strength
- **Color**
  - can be tinted to a wide variety of colours
  - Can even be formulated as an optically clear material
  - Suitable for window wall or roof applications
- **Set / Cure time**
  - Has a FAST cure time - can be configured for within minutes OR as long as one hour
- **With or without fillers**
  - fillers could be aggregates, ground glass, ground plastic, fly-ash, petroleum coke and other waste materials

CheMix
Product Background

- CheMix has a long history with the US military - but was never commercialized
- Used to repair roads / runways damaged by mortars & IEDs in Iraq & Afghanistan
    - US Army Corps of Engineers used more than 10M lbs in Afghanistan
- Designed to repair road washouts and highways quickly with
    - Capable of quickly filling deep holes and wide gaps (3M deep, 15M wide)
    - Solution poured till level with top to cure - ready to use within minutes
    - Dade County Hurricane testing - projectile did not even mark the wall
- A road built with CHEMIX in 1970s is still in use and in good condition today

CheMix - Many Construction Applications



New Materials & Methods for Modern Construction

- **Building Structure**
  - Foundation
  - Structural Walls
  - Floors
  - Roof
- **Building Elements**
  - Curtain Walls
  - Partition Walls
  - Window Walls
- **Parking Areas**
  - driveway
  - parking structure
- **Landscaping**
  - retaining walls
  - sidewalks
  - steps

CheMix

Material Properties

- Liquid formula
- Cures quickly (15 seconds to 15 minutes
- Available in a wide variety of colors
- does NOT require rebar reinforcement
- does NOT absorb water
- Serves as a thermal break

Features that can be customized

- colour
- set time
- hardness / flexibility

Working with CheMix

- **CheMix** needs no special equipment to transport or dispense on site
  - It does NOT require mix trucks or pumper trucks as concrete does
  - It can be shipped using light trucks and totes (for small jobs) or tank trucks
- **CheMix** is much easier to dispense on the job site
  - It fills up forms with a consistency similar to water
  - It is pumped with a long, lightweight hose - easily handled by one person
- **CheMix** is self levelling - does not need to be vibrated or troweled
- **CheMix** is MUCH less time-sensitive to work with than concrete

CheMix

Application Methods

Poured

as in concrete forms

Moulded

large texture fence panel, tilt up wall panels

Blown / Foamed

Ideal for making strong / lightweight panels

Injected

pre-fab stairway, seating for stadiums

Sprayed

coatings over walls, roofs, domes

CheMix 20K

MATERIAL PROPERTIES

- Flex Modulus - 20,000 psi
- Tensile Strength - 1,200 psi
- Elongation - 450 %
- Hardness - Shore A - 60 A

FORMULA APPLICATIONS

- Road pothole repair for asphalt or concrete
- heavy traffic industrial floors
- chemical prone spill floors
- refrigeration space floors
- marine break-walls,
- under ceramic and other
- traditional flooring

CheMix 35K

MATERIAL PROPERTIES

- Flex Modulus - 35,000 psi
- Tensile Strength - 2,000 psi
- Elongation - 400 %
- Hardness - Shore A - 75 A

FORMULA APPLICATIONS

- Road pothole repair for asphalt or concrete
- heavy traffic industrial floors
- chemical prone spill floors
- refrigeration space floors
- marine break-walls,
- under ceramic and other
- traditional flooring

CheMix 240K

MATERIAL PROPERTIES

- Flex Modulus - 240,000 psi
- Tensile Strength - 5,500 psi
- Elongation - >20 %
- Hardness - Shore D - 80 D

FORMULA APPLICATIONS

- Road pothole repair for asphalt or concrete
- High traffic industrial floors
- chemical prone spill floors
- refrigeration space floors
- marine break-walls,
- under ceramic and other
- traditional flooring

CheMix 350K

MATERIAL PROPERTIES

- Flex Modulus - 350,000 psi
- Tensile Strength - 5,000 psi
- Elongation - >18 %
- Hardness - Shore D - 70 D

FORMULA APPLICATIONS

- Road pothole repair for asphalt or concrete
- High traffic industrial floors
- chemical prone spill floors
- refrigeration space floors
- marine break-walls,
- under ceramic and other
- traditional flooring

CheMix

MOST Distinguishing Features

Physical Properties

- EXTREME strength and durability

Ease of Handling / Storage

- Easy to move, pump and apply

Time Savings

- Quick set-up time is a HUGE advantage

Safe for enclosed spaces

Versatility

- FireSafe Technology can be applied to a variety of applications

CheMix

Compared to Concrete

Less Equipment

- EXTREME strength and durability
- No more scheduling loads of product
- No more pumper trucks

Ease of Handling / Storage

- Easy to move, pump and apply

Time Savings

- Quick set-up time is a HUGE advantage

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