

Parking Garage

Concrete Maintenance
Solutions





Introduction

CERATECH designs, manufactures and supplies highly engineered “**green sustainable**” concrete repair products that facilitate **RAPID RETURN TO SERVICE** of income producing parking assets.

CERATECH's rapid repair products are **green friendly**, extremely easy to use and **provide for durable repairs within the highly dynamic parking structure environment.**

All of **CERATECH's** products are corrosion resistant and possess **low permeability characteristics** making them **less susceptible to chlorides and other chemicals prevalent in parking facilities.** **CERATECH** products are highly durable, resisting scaling, abrasion and damage from freeze thaw environments.

Minimize interruptions to revenue while ensuring **a safe environment for patrons employees and vehicles** with **CERATECH's** revolutionary family of rapid concrete repair products!

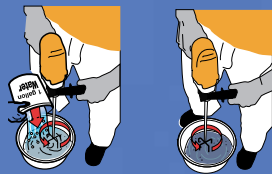
▼ “Green” Material Technology

CERATECH's “triple green” material technology was born over ten years ago in an effort to develop commercially viable concrete repair materials from an assortment of industrial waste streams. **Our proprietary blend of inert minerals and various waste streams yield a non-traditional cementitious material, possessing a highly flexible base chemistry with extremely unique performance and application advantages.** Revolutionary product characteristics provide end users with a value added “**green solution**” for today’s most challenging rapid repair applications.

▼ Product Benefits

- Non-shrink & shrinkage compensated options
- Exceptional sustained bond strengths (slant shear and direct tension)
- Low coefficient of thermal expansion (CTE)
- Mild modulus of elasticity (MOE)
- Very low permeability- Highly resistant to sulfate, chloride and chemical attack
- Exceptional durability- Highly resistant to freeze thaw cycles, scaling & abrasion
- Temperature Tolerant- Applicable from -20°F to 120°F
- Exceptional cohesiveness for spray mortar applications





CERATECH's Pavemend® brand of high performance concrete repair products are being utilized extensively from the Korean peninsula to Afghanistan, Iraq and the US by both military, state DOTs and private contractors to address various urgent infrastructure issues.

All Pavemend® Rapid Repair products are single component powders that are water activated, safe to handle and clean up easily with water!



Semi-Self Leveling VERY RAPID Repair Mortar
Trowelable & Extendable



- 4 - 6 minutes working time @72°F
- 1 hour return to service (> 3,000 psi)
- Applicable from 0°F /-17°C to 90°F /32°C
- Extendable up to 100% by weight with 3/8" (1cm) or 1/2" (1.3cm) clean washed fractured stone
- 46 lb. (20.8 kg) 5 Gallon / 19L Bucket
- Yield (Neat) 0.42 ft³ / .012m³
- Yield (Extended 100%) 0.80 ft³ / .022m³



Self Leveling VERY RAPID Repair Mortar



- 7 - 9 minutes working time @72°F
- 2 hour return to service (>2,500 psi)
- Applicable from 30°F /-1°C to 110°F /43°C
- 45 lb. (20.4 kg) 5 Gallon 19L Bucket
- Yield (Neat) 0.42 ft³ / .012m³
- Ideal for pre-cast grouting



Semi Leveling RAPID Repair Mortar -
Trowelable Extendable



- 25 - 30 minutes working time @ 72°F
- 3 hour return to service (>3,000 psi)
- Applicable from 40°F /4°C to 120°F /49°C
- Extendable up to 100% by weight with 3/8" (1cm) or 1/2" (1.3cm) clean washed fracture stone
- 47 lb. (21.3 kg) 5 Gallon / 19L Bucket
- Yield (Neat) 0.43 ft³ / .012m³
- Yield (Extended 100%) 0.80 ft³ / .022m³
- Can be returned to a gel state by re-mixing with drill and paddle

Product Characteristics

- **High early strengths** - Allowing for quick return to service of critical assets
- **Stable dimensional characteristics** - For permanency of repairs
- **Easy to mix, place, finish & texture** - Water mix and clean-up
- **Non-hazardous** - Green sustainable material!
- **Can be applied in ambient temperatures from 0°F to above 120°F** - With no degradation of long term performance characteristics
- **Can be layered** - Without producing cold joints!
- **Bonds tenaciously to multiple materials** - Without the need for a primer or bond coat.
- **Self-Curing** - Does not require moist curing, tenting in cold applications or cooling in high temperatures.



Vertical & Overhead RAPID Repair Mortar



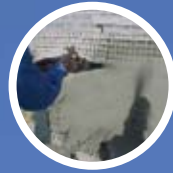
- 15 - 30 minutes working time @ 72°F
- Applicable from 40°F /4°C to 100°F /37°C
- 17 lb. (7.7 kg) 2 Gallon / 7.6L Bucket
- **Yield (Coverage)**
 - @ 0.25" profile = 7.4 ft²
 - @ 0.50" profile = 3.7 ft²
 - @ 1.00" profile = 1.9 ft²
 - @ 4.00" profile = 0.48 ft²
- Can be returned to a gel state by re-mixing with drill and paddle



Visit www.ceratechinc.com for up to the minute product information, case studies and product videos.

Call 1-800-581-8397 for sales east of the Mississippi

Call 1-800-708-7963 for sales west of the Mississippi



jetrok™ 
 SPRAYABLE HI-STRENGTH MORTAR

High Strength, Rapid Cure One Part Shotcrete



CERATECH's single component cement binder technology provides for a high strength mortar that can be sprayed onto most porous surfaces to create *a highly durable repair*. **Jetrok™ can also be used for rapid build new construction projects.**

Jetrok™ has 30 minutes of potlife and *will reach compressive strengths over 3,000 psi in under 4 hours with exceptional adhesion to reinforcing steel.*

Available in 66 pound bags or 2,200 pound Super Sacks

- Beam & Column Repair
- Spall Repairs
- High Strength Bond Beams



GREATWHITE120™ Rapid Large Area Volumetric Cement LARGE AREA REPAIR CONCRETE

GreatWhite120™ is an extremely versatile, cementitious, rapid setting, semi-leveling structural repair concrete. It is a single component powder that is water activated.

GreatWhite120™ has 20 minutes of working time and will reach compressive strengths of more than 2,500 psi, **2 hours from the addition of water!**

GreatWhite120™ can be applied in ambient temperature ranges from 30 to 120 degrees Fahrenheit, finishes like traditional Portland based concrete and cleans up easily with water. Available in 70 pound plastic bags or 2,200 pound Super Sacks.

GreatWhite120™ cement is designed for use with volumetric concrete mixers to efficiently address large scale, full or partial depth rapid garage repair projects.



CERATECH
 The Leader In **GREEN** Construction Cements!



D.O.T.Line™ & Mainline™ Rapid Repair Concrete were specifically developed to provide **an economical solution** to real world rapid repairs of failing infrastructure.

D.O.T.Line™ & Mainline™ are turn-key, semi-leveling, high performance structural repair concretes. **D.O.T.Line™ & Mainline™** have 25 and 35 minutes of working time respectively and **will reach compressive strengths of more than 2,500 psi in just 2 hours (D.O.T.Line™) and 4 hours (Mainline™) from the addition of water (not final set) enabling rapid "Return To Service" to parking customers and revenue!**

D.O.T.Line™ & Mainline™ are simple to use! They can be mixed using standard equipment and can be placed in a wide ambient temperature range of 30 to 120 degrees Fahrenheit. They can also be handled without skin irritations or chemical burns. **D.O.T.Line™ & Mainline™** offer **bond and flexural strengths superior to that of most competitive repair products, making them an optimal choice for durable, cost effective repairs to vital parking structure assets.**



Applications:

Parking Decks

Rampways

Pre Cast Repair

Full & Partial Depth Slab Replacement

Grouting / Mudjacking

Form & Pour

Post Tension Caps

Cast In Place

Curb & Gutters

Impact Damage to Beams & Columns

Joint Spalls



Applicable Standard C928 for Rapid Hardening Cementitious Materials for Concrete Repair



Compressive Strengths psi

1 Hour	3453	2700	2753	3000	3000	3000	2514	2508	C109/C39
2 Hours	3865	3870	2753	3000	3000	3000	3200	3000	C109/C39
3 Hours	3966	4230	4298	5352	5100	5100	5210	5170	C109/C39
4 hours	4090	5570	5539	6147	6800	6800	7220	7690	C109/C39
24 Hours	5630	6300	8960	7114	9212	9212	9300	9850	C109/C39
7 days	7483	1100	2067	1270	2000	2000	2274	2300	C882
28 days	2866	2000	2500	1930	3200	3200	3295	3100	C882
Flexural Strengths psi									
7 days	600	680	578	620	802	802	855	922	C78
28 days	930	910	792	1500	925	925	1008	1320	C78
Tensile Strengths psi									
7 days	195	240	307	230	600	600	490	610	C496
28 days	386	345	590	450	684	684	720	780	C496
Scaling Resistance lbs/ft ²									
50 Cycles	0	0	0	0	0	0	0	0	C672
(A Mild Modulus of Elasticity Contributes To Long Term Compatibility With Concrete Host)									
Modulus Of Elasticity	millionsth / psi	1.7	3.3	2.77	3.16	4.8	4.9	4.8	C469
Coefficient of Thermal Expansion millionsth / F									
28 days	2.95	2.82	TBD	2.52	4.7	4.7	4.7	4.7	(AASHTO) TP-60
Length Change, % of Total length 28 days soak / 28 days dry									
28 days	0.0085 / -0.0460	0.0085 / -0.0595	TBD / -0.002	NA	-0.0280 / -0.0080	-0.0280 / -0.0080	-0.0280 / -0.0080	-0.0300 / -0.0100	C157
Rapid Freeze Thaw Resistance (Durability Factor - Retained Percentage of Dynamic Modulus)									
300 Cycles	99.6 %	99.6 %	100 %	NA	100 %	100 %	100 %	100 %	C666A
Set Times @72 °F/22 °C									
Initial (Working Time)	4 - 6 min.	7 - 9 min.	10 - 15 min.	25 - 35 min.	35 min.	35 min.	25 min.	25 - 35 min.	
Final	6 - 8 min.	12 - 15 min.	25 - 35 min.	50 - 60 min.	60 min.	60 min.	45 min.	40 - 50 min.	
Return To Service									
Foot Traffic	20 min. +	20 min. +	60 min. +	60 min. +	1.5 hours	1.5 hours	1.25 hours	1.5 hours	
Wheeled Traffic	1 hour +	2 hours +	2-3 hours +	2-3 hours +	4 hours	4 hours	2 hours	2 hours	

● Test Results provided by Froehling and Robertson ■ Test Results provided by Penniman & Browne
 ○ Test Results developed by internal testing + From final set — From addition of water

* Refer To CERATECH Product Data Sheets For Up To Date Performance Data