



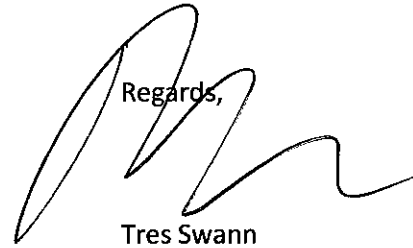
April 4, 2011

Department of Administration  
Purchasing Division  
Attn: Sheri Slone – File 13  
Building 15  
2019 Washington Street, East  
Charleston, WV 25305-0130

**RE: RFQ 0311C209      Bid Opening Date: 04/07/2011, 1:30PM**

Ms. Slone:

Enclosed is our submission and supporting documentation for the above referenced RFQ. Should you require any additional detail or clarification, please do not hesitate to contact me at the numbers listed below.

Regards,  
  
Tres Swann

TS/lasiii

Enclosures

RECEIVED

2011 APR -5 A 9: 16

PURCHASING DIVISION  
STATE OF WV

757.461.6301  
800.637.2264  
FAX 757.461.4669  
[www.specialtyproducts.net](http://www.specialtyproducts.net)



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

# Request for Quotation

RFQ NUMBER  
**0311C209**

PAGE  
**1**

ADDRESS CORRESPONDENCE TO ATTENTION OF  
**BUYER 33  
 304-558-2402**

PROPERTY

**RFQ COPY**  
**TYPE NAME/ADDRESS HERE**  
 Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
 First Floor  
 Norfolk, VA 23502

SHIP TO

**DIVISION OF HIGHWAYS  
 DISTRICT THREE**  
**624 DEPOT ST  
 PARKERSBURG, WV  
 26101 304-420-4595**

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
03/09/2011				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	Estimate per pg.17 756 bags			085-25	\$ 22.99	\$ 17,380.44
	<b>BAGS CEMENT</b>			Pavemend SL is submitted as an "Or Equal" and is on the approved products list as indicated on Page 11 of this RFQ.		
				** This material is also a highly 'green' and 'green sustainable' product.**		
				<b>REQUEST FOR QUOTATION (RFQ) OPEN END CONTRACT</b>		
				THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS FOR AN OPEN END CONTRACT TO PROVIDE 50 LB BAGS OF EUCO SPEED (PRODUCT 083A50) OR EQUAL FOR DISTRICT THREE BRIDGE DEPARTMENT PER THE ATTACHED SPECIFICATIONS.		
				TECHNICAL QUESTIONS CONCERNING THIS SOLICITAION MUST BE SUBMITTED IN WRITING TO SHERI SLONE IN THE WEST VIRGINIA STATE PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS RFQ, VIA FAX AT 304-558-4115, OR VIA EMAIL AT SHERI.D.SLONE@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 03/28/2011 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM TO BE ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.		
				EXHIBIT 10		
				REQUISITION NO.: .....		

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE	TELEPHONE	DATE	
	757.461.6301	04/04/2011	
TITLE President	FEIN 54-1445976	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

## GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
  2. The State may accept or reject in part, or in whole, any bid.
  3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
  4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
  5. Payment may only be made after the delivery and acceptance of goods or services.
  6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
  7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
  8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
  9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
  10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
  11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
  12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
  13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at [www.state.wv.us/admin/purchase/vrc/hipaa.htm](http://www.state.wv.us/admin/purchase/vrc/hipaa.htm) and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
  14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
  15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
  16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.
- I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

### INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
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# Request for Quotation

RFQ NUMBER  
**0311C209**

PAGE  
**2**

ADDRESS CORRESPONDENCE TO ATTENTION OF  
**BUYER 33  
 304-558-2402**

PROPERTY RECORD

**RFQ COPY  
 TYPE NAME/ADDRESS HERE**

Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
 First Floor  
 Norfolk, VA 23502

PROPERTY RECORD

**DIVISION OF HIGHWAYS  
 DISTRICT THREE**

**624 DEPOT ST  
 PARKERSBURG, WV  
 26101 304-420-4595**

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
03/09/2011				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p><b>ADDENDUM ACKNOWLEDGEMENT</b></p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p><b>ADDENDUM NO.'S:</b></p> <p>NO. 1 ..... <i>[initials]</i></p> <p>NO. 2 ..... <i>[initials]</i></p> <p>NO. 3 ..... <i>[initials]</i></p> <p>NO. 4 ..... <i>[initials]</i></p> <p>NO. 5 ..... <i>[initials]</i></p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>.....  <b>SIGNATURE</b>            Specialty Products, Inc.            .....  <b>COMPANY</b>            Date: 04/04/2011            .....</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>[Signature]</i>	TELEPHONE 757.461.6301	DATE 04/04/2011	
TITLE President	FEIN 54-1445976	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ. INSERT NAME AND ADDRESS IN SPACE ABOVE LABELLED 'VENDOR'



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

# Request for Quotation

RFQ NUMBER  
**0311C209**

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**3**

ADDRESS CORRESPONDENCE TO ATTENTION OF  
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 304-558-2402**

VENDOR

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Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
 First Floor  
 Norfolk, VA 23502

SHIP TO

**DIVISION OF HIGHWAYS  
 DISTRICT THREE  
 624 DEPOT ST  
 PARKERSBURG, WV  
 26101 304-420-4595**

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
03/09/2011				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
					DATE 04/04/2011	
<p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p> <p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE UPON AWARD AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	757.461.6301	04/04/2011

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	54-1445976	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia  
 Department of Administration  
 Purchasing Division  
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# Request for Quotation

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PAGE  
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ADDRESS CORRESPONDENCE TO ATTENTION OF  
**BUYER 33  
 304-558-2402**

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Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
 First Floor  
 Norfolk, VA 23502

**DIVISION OF HIGHWAYS  
 DISTRICT THREE**

**624 DEPOT ST  
 PARKERSBURG, WV  
 26101 304-420-4595**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
03/09/2011				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p><b>NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</b></p> <p><b>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</b></p> <p><b>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</b></p> <p><b>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</b></p> <p><b>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</b></p> <p><b>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED</b></p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	TELEPHONE 757.461.6301	DATE 04/04/2011
TITLE President	FEIN 54-1445976	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ. INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

# Request for Quotation

RFQ NUMBER  
**0311C209**

PAGE  
**5**

ADDRESS CORRESPONDENCE TO ATTENTION OF  
**BUYER 33**  
**304-558-2402**

### RFQ COPY

#### TYPE NAME/ADDRESS HERE

Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
 First Floor  
 Norfolk, VA 23502

#### DIVISION OF HIGHWAYS DISTRICT THREE

624 DEPOT ST  
 PARKERSBURG, WV  
 26101 304-420-4595

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
03/09/2011				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 05/26/2009</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p>EXHIBIT 4</p> <p>LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.</p> <p>REV. 3/88</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p>						

SIGNATURE				TELEPHONE 757.461.6301		DATE 04/04/2011
TITLE President		FEIN 54-1445976		ADDRESS CHANGES TO BE NOTED ABOVE		

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'







State of West Virginia  
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# Request for Quotation

RFQ NUMBER  
**0311C209**

PAGE  
**7**

ADDRESS CORRESPONDENCE TO ATTENTION OF  
**BUYER 33  
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VENDOR

Specialty Products, Inc.  
 5660 E. Virginia Beach Blvd.  
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SHIP TO

**DIVISION OF HIGHWAYS  
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DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
<b>03/09/2011</b>				

BID OPENING DATE: **04/07/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>***** THIS IS THE END OF RFQ 0311C209 ***** TOTAL:</p> <p>Based upon the Estimated evaluation quantity called for on page 17 of this RFQ.</p>						\$ 17,380.44

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE 757.461.6301	DATE 04/04/2011
TITLE President	FEIN 54-1445976	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

## Request for Quotation Specifications

Purpose: To establish an open end contract to provide the West Virginia Division of Highways, District Three Bridge Department with bags of packaged, dry, rapid-hardening cementitious materials for concrete repairs.

### SCOPE

- This specification covers packaged, dry, cementitious mortar or concrete materials for rapid repairs to hardened hydraulic-cement concrete pavements and structures. Materials that contain organic compounds, such as bitumens, epoxy resins, and polymers, as the principal binder are not included.

- Packaged, dry, concrete material contains aggregate of which at least 5% by mass of the total mixture is retained on a 9.5-mm [3/8-in.] sieve.

- Packaged, dry, mortar material contains aggregate of which at least 5% by mass of the total mixture is retained on a 9.5-mm [3/8-in.] sieve.

- Aqueous solutions, aqueous emulsions or dispersions may be included as components of the packaged materials. The manufacture may specify that these liquids are to replace some or all of the mixing water.

- Aggregates must be included as a component of the packaged materials. The manufacturer may recommend job site addition of specific amounts and types of additional aggregates to his product for some uses. However, such reformulated products are not within the scope of this specification.

- The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

- The following safety hazards caveat pertains to the test methods portion of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### Performance Requirements

The materials shall comply with the performance requirements in Table 1.

<sup>1</sup>This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.43 on Packaged Dry Combined Materials.

Current edition approved Dec. 1, 2009. Published January 2010. Originally approved in 1980. Last previous edition approved in 2008 as C928/C928M - 08. DOI: 0.1520/C0928\_C0928M-09.

Product shall perform as Type R-3

**TABLE 1 Performance Requirements<sup>A</sup>**

	3 h	1 day	7 days	28 days
<b>Compressive Strength,</b> min, Mpa [psi]	21 [3000]	35 [5000]	35 [5000]	<sup>B</sup>
<b>Bond Strength, min, Mpa</b> [psi]	--	7 [1000]	10 [1500]	--
<b>Length change, base on</b> <b>length at 3 h, max, %</b>	allowable increase after 28 days in water			+0.15
	allowable decrease after 28 days in air			-0.15
<b>Consistency of concrete</b> <b>or mortar<sup>C</sup></b>			concrete slump, min, mm [in.]	Flow of mortar,min,%
<b>R-3 consistency at 5 min after</b> <b>addition of mixing liquid</b>			75 [3]	100
<b>Scaling resistance to deicing</b> <b>chemicals after 25 cycles of</b> <b>freezing and thawing</b> <b>Concrete, max visual rating</b> <b>Mortar, max scaled material<sup>D</sup></b>			2.5 5 kg/m <sup>2</sup> [1 lb/ft <sup>2</sup> ]	

<sup>A</sup> It is recognized that other characteristics of rapid-hardening concrete repair materials might need consideration. Such characteristics might be necessary in some environments and applications; however, to impose specification limits on all products is considered beyond the scope of this specification. Optional considerations with suggested methods of test may include tests for the following:

Time of setting	Test Method C403/C403M
Flexural strength	Test Method C78
Freeze thaw	Test Method C666/C666M, Procedure A
Sulfate expansion	Test Method C1012

<sup>B</sup> The strength at 28 days shall be not less that the strength at 7 days.

<sup>C</sup> Slump of flow requirements are waived for materials intended for vertical or overhead applications.

<sup>D</sup> A 250-mm [10-in.] square spalled to an average depth of 3 mm [1/8 in.] for 100% of its surface would have about 10 kg/m<sup>2</sup> [2.0 lb/ft<sup>2</sup>] scaled material.

Vendors bidding "or equal" merchandise must provide complete manufacturer's literature demonstrating adherence to the mandatory requirements contained herein.

**DELIVERY:** The above material is to be delivered to the WV Division of highways, District Three lot, located at 1423 Mill Run Road, Parkersburg, WV 26104 (Quonset Hut). The Divison of Highways will only ask for complete truckloads to be delivered.

Vendor to notify District Three Bridge Engineer, Cliff Essig, two (2) days prior to delivery at (304) 420-4674.

## 715.4 - Approved Patching Materials for Portland Cement Concrete



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[Transportation](#) > [Highways](#) > [Materials](#) > 715.4 - Approved Patching Materials for Portland Cement Concrete
**715.4 - Approved Patching Materials for Portland Cement Concrete**

Effective: October 14, 2010

Contact: John Fowler (304) 558-9889

Email: [John.W.Fowler@wv.gov](mailto:John.W.Fowler@wv.gov)

Materials Code: 1941

**715.4.1 Cementitious Materials for Concrete Patching**

Brand Name	Manufacturer	Type(s)	Approved Lab Number
Duracrete II	Kaufman Products (K098A)	R-1, R-2 & R-3	1380730
ChemSpeed 65	Chem Masters (C339A)	R-1, R-2, & R-3	1380461
HD-50 Heavy Duty Concrete Patch	Dayton Superior Corp. (D013A)	R-1, R-2	1390166
Euco-Speed MP	Euclid Chemical (E091A)	R-1, R-2, & R-3	1380589
Commerical Grade Fast Set Non-Shrink Grout	Quickrete (Q001A)	R-1, R-2, & R-3	1390142
Commercial Grade Fast Set DOT Mix	Quickrete	R-1, R-2, & R-3	1390143
Commercial Grade Fast Set Repair Mortar	Quickrete	R-1, R-2	1390141
Thoroc 10-60	BASF Construction Chemicals (B266A)	R-1, R-2	1395329
Thoroc 10-61	BASF Construction Chemicals (B266A)	R-1	1395327
Set 45	BASF Construction Chemicals	R-1, R-2, & R-3	1392904
Hydrozo Silane 40 VOC	BASF Construction Chemicals (B266A)		1395330

715.4 - Approved Patching Materials for Portland Cement Concrete

Contact Us   Site Map   Disclaimer E.E.O./AFFIRMATIVE ACTION EMPLOYER  Privacy, Security and Accessibility   WV.gov   USA.gov   © 2011 State of West Virginia	Pavement SL	Cera Tech, Inc. (C425A)	R-1, R-2, & R-3	1394667
	DOTLine	Cera Tech, Inc. (C425A)	R-1, R-2	1394668
	1394667	Cera Tech, Inc. (C425A)	R-1, R-2, & R-3	1394669
	MG-KRETE	1IMCO Technologies, Inc. (1094A)	R-1, R-2	1392905

715.4.2 Non-Cementitious Materials for Concrete Patching

Brand Name	Manufacturer	Approved Lab Number



Designation: C928/C928M – 09

## Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs<sup>1</sup>

This standard is issued under the fixed designation C928/C928M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

### 1. Scope\*

1.1 This specification covers packaged, dry, cementitious mortar or concrete materials for rapid repairs to hardened hydraulic-cement concrete pavements and structures. Materials that contain organic compounds, such as bitumens, epoxy resins, and polymers, as the principal binder are not included.

1.1.1 Packaged, dry, concrete material contains aggregate of which at least 5 % by mass of the total mixture is retained on a 9.5-mm [ $\frac{3}{8}$ -in.] sieve.

1.1.2 Packaged, dry, mortar material contains aggregate of which less than 5 % by mass of the total mixture is retained on a 9.5-mm [ $\frac{3}{8}$ -in.] sieve.

1.2 Aqueous solutions, aqueous emulsions or dispersions may be included as components of the packaged materials. The manufacturer may specify that these liquids are to replace some or all of the mixing water.

1.3 Aggregates must be included as a component of the packaged materials. The manufacturer may recommend job site addition of specific amounts and types of additional aggregates to his product for some uses. However, such reformulated products are not within the scope of this specification.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.5 The following safety hazards caveat pertains to the test methods portion of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard*

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.43 on Packaged Dry Combined Materials.

Current edition approved Dec. 1, 2009. Published January 2010. Originally approved in 1980. Last previous edition approved in 2008 as C928/C928M – 08. DOI: 10.1520/C0928\_C0928M-09.

*to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

#### 2.1 ASTM Standards:<sup>2</sup>

- C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens
- C78 Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
- C109/C109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
- C143/C143M Test Method for Slump of Hydraulic-Cement Concrete
- C157/C157M Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
- C192/C192M Practice for Making and Curing Concrete Test Specimens in the Laboratory
- C403/C403M Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance
- C494/C494M Specification for Chemical Admixtures for Concrete
- C666/C666M Test Method for Resistance of Concrete to Rapid Freezing and Thawing
- C670 Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials
- C672/C672M Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- C702 Practice for Reducing Samples of Aggregate to Testing Size
- C778 Specification for Standard Sand
- C882 Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

\*A Summary of Changes section appears at the end of this standard.

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C1012 Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution  
E96/E96M Test Methods for Water Vapor Transmission of Materials

### 3. Materials and Manufacture

3.1 Three types of packaged, dry, rapid-hardening concrete and three types of packaged, dry, rapid-hardening mortar are identified in Table 1.

**TABLE 1 Performance Requirements<sup>a</sup>**

	3 h	1 day	7 days	28 days
<b>Compressive Strength, min, MPa [psi]</b>				
R1 concrete or mortar	3.5 [500]	14 [2000]	28 [4000]	<sup>b</sup>
R2 concrete or mortar	7.0 [1000]	21 [3000]	28 [4000]	<sup>b</sup>
R3 concrete or mortar	21 [3000]	35 [5000]	35 [5000]	<sup>b</sup>
<b>Bond strength, min, MPa [psi]</b>				
R1, R2 and R3 concrete or mortar	—	7 [1000]	10 [1500]	—
<b>Length change, based on length at 3 h, max, %</b>				
R1, R2, and R3 concrete or mortar	allowable increase after 28 days in water			+0.15
	allowable decrease after 28 days in air			-0.15
<b>Consistency of concrete or mortar<sup>c</sup></b>				
			concrete slump, min, mm [in.]	Flow of mortar, min, %
R1 consistency after 15 min after addition of mixing liquid			75 [3]	100
R2 and R3 consistency at 5 min after addition of mixing liquid			75 [3]	100
<b>Scaling resistance to deicing chemicals after 25 cycles of freezing and thawing</b>				
Concrete, max visual rating			2.5	
Mortar, max scaled material <sup>d</sup>			5 kg/m <sup>2</sup> [1 lb/R <sup>2</sup> ]	

<sup>a</sup> It is recognized that other characteristics of rapid-hardening concrete repair materials might need consideration. Such characteristics might be necessary in some environments and applications; however, to impose specification limits on all products is considered beyond the scope of this specification. Optional considerations with suggested methods of test may include tests for the following:

Time of setting	Test Method C403/C403M
Flexural strength	Test Method C78
Freeze thaw	Test Method C668/C666M, Procedure A
Sulfate expansion	Test Method C1012

<sup>b</sup> The strength at 28 days shall be not less than the strength at 7 days.

<sup>c</sup> Slump or flow requirements are waived for materials intended for vertical or overhead applications.

<sup>d</sup> A 250-mm [10-in.] square spalled to an average depth of 3 mm [1/8 in.] for 100 % of its surface would have about 10 kg/m<sup>2</sup> [2.0 lb/ft<sup>2</sup>] of scaled material.

### 4. Chemical Composition

4.1 If the material contains soluble chlorides or other ingredients in sufficient quantity to cause corrosion to steel reinforcement, the package markings shall contain the following statement in letter size no smaller than the directions for use:

This material is not recommended for use in a moist environment in contact with steel reinforcement.

4.1.1 Consider a total chloride ion content (Berman, 1972)<sup>3,4</sup> in the packaged repair material greater than 600 g/m<sup>3</sup> [1 lb/yd<sup>3</sup>] of the hardened repair material indicative that the packaged material contains sufficient chlorides to cause corrosion to steel reinforcement when the concrete is exposed to weather, is on the ground, or is in an otherwise moist environment. A much lower chloride ion content is suggested for use in prestressed concrete. Guidance for such users is outside the scope of this specification.

4.2 If the material contains metallic iron in excess of 1 % by weight, the package markings shall contain the following statement in letter size no smaller than the directions for use:

If small or scattered spots of iron-staining are considered objectionable, do not use this material where it will be exposed.

### 5. Performance Requirements

5.1 The materials shall comply with the performance requirements in Table 1 for the applicable type.

### 6. Sampling

6.1 A lot is the quantity of packaged repair material normally placed on a pallet. In general, this quantity will weigh from 900 to 1800 kg [2000 to 4000 lb].

6.2 A unit sample is a single package of material randomly selected from the lot.

### 7. Specimen Preparation

7.1 **Concrete**—Mechanically mix the packaged dry concrete material with mixing liquid. Determine the properties of the unhardened mixture, and mold and cure the specimens in accordance with Practice C192/C192M or modifications as outlined herein.

7.1.1 The sample of packaged dry material shall be any combination of whole packages yielding not less than 20 L [7/8 ft<sup>3</sup>] of hardened material.

7.1.2 Base the quantity of water, other liquid component, or both added to the sample on the quantity per bag stated in the directions for use.

7.1.3 Place the sample in the mixing machine and add the required amount of liquid. Start mixing immediately. Continue mixing for the length of time indicated in the directions for use.

7.1.4 When making the slump test in accordance with Test Method C143/C143M, schedule work so the test will be completed in  $5 \pm \frac{1}{2}$  min after the mixing liquid is added to the R2 or R3 materials or  $15 \pm \frac{1}{2}$  min after mixing the liquid with the R1 materials.

7.1.5 Mold the required number of specimens using additional samples as may be necessary, mixed in accordance with

<sup>3</sup> Berman, H. A., Determination of Chloride in Hardened Portland Cement Paste, Mortar, and Concrete. *ASTM Journal of Materials*, Vol. 7, No. 3, pp. 330-335, 1972.

<sup>4</sup> Clear, K. C., and Harrigan, E. T., "Sampling and Testing for Chloride Ion in Concrete," Report No. FHWA-RD77-85, Federal Highway Administration, Washington, DC, August 1977 (Available as PB 275-428/AS National Technical Information Services).


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7.1.1-7.1.4. Do not use the mixtures for molding test specimens when the slump is less than that specified in Table 1.

Note 1—Where the nominal maximum particle size is not greater than 25 mm [1 in.], the use of cylindrical molds 100 mm [4 in.] in diameter by 200 mm [8 in.] in length is suggested.

7.2 *Mortar*—Mechanically mix packaged dry mortar material with mixing liquid. Determine the properties of the unhardened mixture, and mold and cure the specimens in accordance with Test Method C109/C109M or modifications as outlined herein.

7.2.1 The sample of packaged dry material shall weigh 3000 ± 3 g [6.6 ± 0.005 lb] and shall be representatively obtained from a whole package in accordance with Practice C702.

7.2.2 Base the quantity of water, or other liquid component, or both added during mixing on the quantity per unit of weight stated in the directions for use.

7.2.3 When making the flow test in accordance with the section on consistency in Test Method C109/C109M, schedule work so the test will be completed in 5 ± ½ min after the start of mixing liquid with the R2 or R3 materials or 15 ± ½ min after mixing the liquid with the R1 materials.

7.2.4 Mold the required number of specimens using additional samples as necessary mixed in accordance with 7.2.1-7.2.3. Do not use the mixtures for molding test specimens when the flow is less than that specified in Table 1.

7.3 In those cases where the manufacturer has indicated in the package markings, or elsewhere, that the packaged repair material can be mixed and applied at temperatures that lie beyond the range of 20 ± 8 °C [70 ± 15 °F], the product must meet the requirements of Table 1. Specimens must be made and cured in accordance with the procedures of this section. The mixing, molding and curing temperatures during the first 3 h after molding shall be within ±1 °C [±2 °F] of the extreme temperature(s) stated by the manufacturer in the package markings.

## 8. Test Methods

8.1 *Manifestly Faulty Specimens*—Treat manifestly faulty specimens in accordance with the corresponding section in Specification C494/C494M.

8.2 *Compressive Strength*—Prepare and test three test specimens for each age of test and each level of mixing temperature. Test in accordance with Test Method C39/C39M for concrete and Test Method C109/C109M for mortar.

8.3 *Length Change*—Prepare and test specimens in accordance with Test Method C157/C157M, except as modified by this section and 7.3. Use 25 mm [1-in.] prism for mortar material and 75 mm [3-in.] prism for concrete material.

8.3.1 Remove specimens from the molds at an age of 2½ to 2¾ h after the addition of mixing liquid to the dry cementitious mixture during the mixing operation.

8.3.2 Make the initial observation of length at 3 to 3¼ h after the addition of mixing liquid to the dry cementitious mixture during the mixing operation. When specimens are cured at temperatures other than 23 ± 2 °C [73.4 ± 3 °F], then both initial and final length observations must be made with the bars conditioned to ±2 °C [±3 °F] of initial temperatures.

8.3.3 Immediately store one set of specimens as for “Air Storage” and one set as for “Water Storage” except that the water-stored specimens shall be stored in untreated tap water with no more than one set of specimens per container.

8.3.4 Take observations of length at age 28 days ± 20 h. Determine the average percent change in length when stored in water, and the average change in length of specimens stored in air.

8.4 *Scaling Resistance*—Make and cure the test specimens in accordance with Test Method C672/C672M, except as provided herein. For specimens of mortar omit the visual rating procedure after every 5 cycles and after 25 cycles determine the amount of scaling as the oven dry 110 ± 5 °C [230 ± 9 °F] mass per unit area of exposed test area.

8.5 *Slant Shear Bond Strength*—Prepare six complete test specimens in accordance with Test Method C882 for Type II and V systems except as modified by this section.

8.5.1 Do not apply a bonding system to prepared surface unless a bonding system is required by the manufacturer of the rapid-hardening cementitious material. Fill the top half of the cylinder with the rapid-hardening cementitious material instead of the portland cement mortar specified.

8.5.2 Test three specimens in compression at 1 day and three at 7 days. Calculate the bond strength on the elliptical area and report the failure type.

## 9. Report

9.1 Report the following:

9.1.1 Source and identification, including type, of material tested,

9.1.2 Details of any variations and options practiced by the tester that are recommended or allowed by the manufacturer or others,

9.1.3 Compressive strength of material at 3 h, 1 day, 7 days and 28 days,

9.1.4 Bond strength at 1 day and 7 days,

9.1.5 Percent length change at 28 days in water and in air,

9.1.6 Percent flow in mortar at 5 or 15 min,

9.1.7 Slump in concrete at 5 or 15 min, and

9.1.8 Scaling resistance after 25 cycles.

## 10. Precision and Bias

10.1 *Length Change*:

10.1.1 *Precision*—The precision of the length change test method described in section 8.3 is based on an interlaboratory study that was conducted in 2007.<sup>5</sup> Seven laboratories tested one rapid-hardening material that consisted of commercially available rapid hardening cement blended with three parts standard graded sand complying with Specification C778. The precision values were calculated for both “water storage” and “air storage” of test specimens. A test result is defined in this specification as the average of three separate measurements (triplicate lengthchange specimens).

<sup>5</sup> Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR: C09-1035.




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10.1.2 The single-operator standard deviation for water storage of test specimens has been found to be 0.0031 %.<sup>6</sup> Therefore, results of two properly conducted tests by the same operator on the same material are not expected to differ by more than 0.009 %.<sup>6</sup> The single-operator standard deviation for air storage of test specimens has been found to be 0.0067 %.<sup>6</sup> Therefore, results of two properly conducted tests by the same operator on the same material are not expected to differ by more than 0.019 %.<sup>6</sup>

10.1.3 The multi-laboratory standard deviation for water storage of test specimens has been found to be 0.0078 %.<sup>6</sup> Therefore, results of two properly conducted tests from two different laboratories on the same material are not expected to differ by more than 0.022 %.<sup>6</sup> The multilaboratory standard deviation for air storage of test specimens has been found to be 0.015 %.<sup>6</sup> Therefore, results of two properly conducted tests from two different laboratories on the same material are not expected to differ by more than 0.041 %.<sup>6</sup>

10.1.4 *Bias*—Since there is no accepted reference material suitable for determining any bias that might be associated with this test method, no statement on bias is being made.

## 11. Rejection

11.1 The purchaser has the right to reject material that fails to conform to the requirements of this specification. Rejection shall be reported to the producer or supplier promptly and in writing.

## 12. Certification

12.1 When specified in the purchase order or contract, a producer, supplier, or an independent testing laboratory shall furnish certification to the purchaser that the material has been tested in accordance with this specification and found to meet the requirements. When specified in the purchase order or

<sup>6</sup> These measurements represent, respectively, the (1s) and (2s) limits in accordance with Practice C670.

contract, a report of test results on samples taken from material shipped shall be furnished.

## 13. Product Marking

13.1 Mark all packages to contain the following information:

13.1.1 Specification designation.

13.1.2 R1 or R2 or R3 type.

13.1.3 Directions for use that shall include but are not limited to:

13.1.3.1 When a bonding agent is used in the test of bond strength, the type and kind of adhesive recommended to bond fresh repair material to the concrete or mortar being repaired.

13.1.3.2 The recommended amount of water, other liquid component, or both, to be mixed with the package contents.

13.1.3.3 The recommended length of mixing time or sequence of mixing and resting times in minutes.

13.1.4 Date the material was packaged.

13.1.5 The yield in litres [cubic feet] or yield in square metres per centimetre [square feet per inch] thickness when mixed with the recommended amount of liquid.

13.1.6 The net weight in each container. The contents of any container shall not vary by more than 2 % from the weight stated in the markings. The average weight of filled containers in a lot shall be not less than the weight stated in the markings.

13.1.7 If the product is formulated for use in vertical or overhead applications, it shall be so stated on the package.

## 14. Packaging

14.1 The material from which the containers are made shall have water vapor transmission not greater than 100 g/m<sup>2</sup> [0.2 lb/ft<sup>2</sup>] in 24 h as determined in accordance with Procedure B of Test Methods E96/E96M.

## 15. Keywords

15.1 cementitious mortar or concrete materials for repair; concrete; packaged; mortar; packaged; packaged dry materials for concrete repair; rapid hardening materials; repair materials

## SUMMARY OF CHANGES

Committee C09 has identified the location of selected changes to this specification since the last issue, C928/C928M – 08, that may impact the use of this specification. (Approved December 1, 2009)

(1) Added new Section 10 Precision and Bias and renumbered subsequent sections and footnotes.

Committee C09 has identified the location of selected changes to this specification since the last issue, C928 – 05, that may impact the use of this specification. (Approved October 1, 2008)

(1) Revised the standard as a combined units standard.

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**COST SHEET**  
RFQ #: 0311C209

Item #	Est Quantity	Description*	Unit Cost	Amount
1	756	<p>Euco Speed - or Equal *</p> <p>Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs - Bags</p> <p>* "Or Equal" merchandise-vendor must provide complete manufacturer's literature demonstrating adherence to the mandatory requirements contained herein.</p>	\$22.99	\$17,380.44
		<p><b>The estimated quantity is for evaluation purposes only</b></p> <p>Pavemend SL is submitted as an "Or Equal" and is on the approved products list as indicated on Page 11 of this RFQ.</p> <p>This material is also a highly 'green' and 'green sustainable' product.</p>		
		<b>TOTAL \$</b>		17,380.44

*[Handwritten Signature]* 4/4/2011

GSA P/N: C600 5 Gallon Bucket

GSA P/N: C650 51.8 lb. Bag

# Product Data Sheet



**Semi-Leveling  
RAPID REPAIR CONCRETE**



Updated 9.10.10

## 1 General Characteristics

**SL**® is a cementitious, rapid setting, *semi-leveling* versatile structural repair concrete. It is a single component powder that is water activated. **SL**® has 15 to 20 minutes of working time and will reach compressive strengths of 2,000 psi within one and a half hours and more than 8,500 psi at 28 days. Designed for use in horizontal and near horizontal repair applications, **SL**® can be applied in ambient temperature ranges from 40 to 110 degrees Fahrenheit.

**RECOMMENDED USES:** **SL**® is an ideal rapid repair material for roads and bridges, airport runways, warehouse or manufacturing facility floors, post-tension cable repairs and form and pour projects.

## 2 Additional Physical Properties

### UNIT WEIGHT (With water, sand & aggregate)

138 lb/ft<sup>3</sup>

### SETTING TIME

Set Times at 72°F/22°C at 1" (2.54 cm) material depth

Initial set: 15 - 20 minutes

Final set: 25 - 35 minutes

### VOLUME YIELD

0.38 ft<sup>3</sup> (0.010 m<sup>3</sup>) per 51.8 lb. (23.2 kg) unit

## 3 Specifications

Results provided by licensed engineering test laboratory and represent typical results from production materials. Actual results may vary from third party testing results; however, CERATECH's materials meet and/or exceed established internal quality control standards, (available upon request). All samples were air cured.

Property	As Packaged 4 in. x 8 in. cylinders	Test Method
<b>Compressive Strengths, psi (MPa)</b>		
1.5 hour	2,000 (13.7)	ASTM C 39
2 hours	3,090 (21.3)	ASTM C 39
1 day - 24 hours	6,040 (41.7)	ASTM C 39
7 days	7,900 (54.5)	ASTM C 39
28 days	9,300 (64.1)	ASTM C 39
<b>Flexural Strength, psi (MPa)</b>		
1 day- 24 hours	1,170 (8.1)	ASTM C 78
7 days	1,220 (8.4)	ASTM C 78
28 days	1,270 (8.8)	ASTM C 78
<b>Splitting Tensile Strength, psi (MPa)</b>		
28 days	515	ASTM C 496
<b>Bond Strength, psi (MPa)</b>		
1 day- 24 hours	2,265 (15.6)	ASTM C 882
7 days	3,010 (20.8)	ASTM C 882
28 days	4,380 (30.2)	ASTM C 882
<b>Rapid Freeze Thaw Resistance (Durability Factor - Retained percentage of Dynamic Modulus)</b>		
300 cycles	100%	ASTM C 672
<b>Scaling Resistance, lbs/ft<sup>2</sup> (kg/m<sup>2</sup>)</b>		
50 cycles	0	ASTM C 672
<b>Modulus of Elasticity, msi (GPa)</b>		
28 days	4.02	ASTM C 469
<b>Coefficient of Thermal Expansion, in/in/°F</b>		
28 days	1.43	AASHTO TP 60
<b>Length Change, % of total length</b>		
28 days soak / 28 days dry	-0.024 / -0.042	ASTM C 157

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Technical Support: (888)-341-2600



Semi-Leveling  
**RAPID REPAIR CONCRETE**



Updated 9.10.10

## 4 Site Preparation

Surfaces should be prepared in accordance with ICRI 03730, "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion." and / or ACI 546R-96 "Concrete Repair Guide". Concrete surfaces should be prepared by appropriate mechanical methods to obtain an exposed aggregate surface with a minimum surface profile of +/- 1/16" (1.5 mm) in accordance with ICRI 03732. Pre-existing coatings or surface treatments should be completely removed. Dry, clean, stable surfaces are required. Remove all standing water. Reinforcing steel should have no loose scale. **Surfaces of host concrete must be damp.**

## 5 Mixing Instructions

### Standard Mixing Procedures (Bucket Mixing with Drill & Paddle)

- Loosen material by tumbling bucket & dry mixing *before* adding water.
- To ensure product performance, **DO NOT divide or separate individual units into smaller portions. MIX ENTIRE CONTENTS AT ONE TIME.**
- A drill (6 amp minimum) with a mixer blade turning at least 500 to 800 rpm is required. Drills with speeds greater than 800 RPMs may entrain air in the mix.
- **DO NOT HAND MIX**
- To begin the mixing process, add the proper amount of water:

<b>For Each:</b>	<b>Add:</b>
51 lb (23.2 kg) 5 gallon (18.9 L) bucket or bag	2 U.S. quarts (1.9 L) of water

- For application temps near 72°F/22°C, the ideal water temperature is between 65°F/18°C and 75°F/24°C.
- **After adding the water, it is very important to rapidly incorporate all of the dry SL® powders into water to achieve a uniform wet mixture within the first 30 seconds of mixing. Mix for 3 1/2 to 4 minutes**

### Standard Mixing Procedures for: Rotating Drum Concrete Mixer or Mortar Mixer

- Pre-wet cement mixer with water then drain all water from mixer (away from repair area)
- **Start mixer - SL® requires a total of 2 quarts of water per 51 lb. unit. Initially, add 50% of total mix water to concrete mixer**
- Add pre-determined units of SL®
- Add in remaining **mix water**
- Mix for 5 minutes total
- Pour all contents into repair area
- Clean mixer or repeat process for next batch

### NOTES:

1. In ambient temperatures, < 50°F / 10°C, use warm water from 70°F/22°C to 85°F/29°C
2. In ambient temperatures > 85°F/ 29°C, use cooler water from 50°F/ 10°C to 60°F/16°C
3. Working times will vary when mix water temperature's are outside of these recommendations
4. **Minimum recommended batch size is 2 units ( Use 4 quarts of water for 2 bag batches)**

## 6 Packaging & Shelf Life

### PACKAGING

51.8 lb (23.2 kg) 5 gallon (18.9 L) bucket  
51.8 lb (23.2 kg) bag

### SHELF LIFE

Buckets - 3 years (when stored in original unopened bucket)  
Bags - 1 year

### STORAGE

Buckets are environmentally sealed and require no special storage requirements

## 7 Limitations

- Not recommended for surface temperatures above 110°F/43°C or below 40°F/10°C.  
( Contact CERATECH Tech support for temperatures below 50°F )
- Cannot be pumped.
- Can be mixed with drill and paddle, rotating drum concrete mixer or mortar mixer.

## 8 Application & Finish

- **Surfaces of host concrete must be damp with no standing water.**
- Working times are influenced by surface temperature and repair profile. **Working time can be extended by adding CERATECH's Set Retarder Admixture to mix water. (See Set Retardant product data sheet for more information )**
- Minimum profile thickness is 0.38" (0.9 cm) as packaged. There are no restrictions to the depth of the repair profile.
- For best results, CERATECH recommends monolithic placement of repair materials. Maintain a minimum thickness of 1.00 inch if repair material must be layered. Subsequent placements must be placed before final set of underlying layer has been reached.
- Upon initial set, a broom finish can be applied. Upon final set, the material can be saw-cut, drilled, sanded and/or polished
- Do not re-temper. The addition of water to the surface of the repair will negatively affect the materials final properties.
- **General loading in 1.5 hours for wheeled traffic and 45 minutes for foot traffic after addition of water @70°F**  
**! Add 30 minutes for every 10°F drop in temperature.**  
Contact CERATECH Field Engineering for Cold Weather Applications (50°F / 10°C and below)
- **All previously existing joints must be re-established within 2-3 hours of final set.**
- Clean all tools and equipment with water prior to the material reaching final set.



**Semi-Leveling  
RAPID REPAIR CONCRETE**



Updated 9.10.10

## 8 Safety

- See Material Safety Data Sheet (MSDS).
- This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.
- Dispose of water and materials in accordance with Federal, State and Local regulations.
- The use of a dust mask, safety goggles and gloves is recommended.
- Keep out of the reach of children.

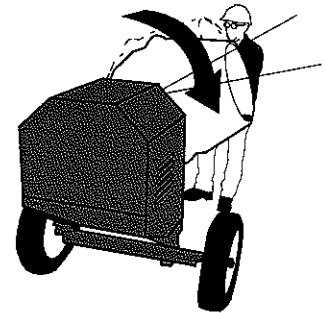
**To Ensure Performance Read All Mixing Instructions Prior To Using!**

### Drill & Paddle Mixing Instructions

**Repair Area Must Be Clean & Mechanically Sound**

- 1 Attach Mixing Paddle to Drill**  
Use the Heavy Duty Drill (Min. 500 rpm) (Max. 800 rpm)
- 2 Tumble SL Bag or Bucket Several Times Prior To Opening To Break Up & Loosen Material**
- 3 Loosen Dry Powder with Drill Paddle.**  
For best results, mix water temperatures should be between 65°F/18°C & 75°F/24°C
- 4 Add 2 quarts of water to 5 gallon bucket**  
Within first 30 seconds, aggressively mix ALL material into water
- 5 Mix for 3 1/2 - 4 minutes with drill and paddle**
- 6 Place SL after mixing for specified time**  
**DO NOT Finish with Water**
- 7 Promptly Rinse All Tools Before Concrete Hardens On Tools**  
**When Utilizing Forms, A Bond Release Agent Must Be Used**

**For Optimum Material Performance, Lower Mix Drum Angle As Low As Possible Without Material Spilling Out.**



## Rotating Drum Portable Concrete Mixer A Minimum Two Bag Batch Is Recommended

- Step 1**  
Pre-wet mixer with water.  
Humedezca preliminarmente con agua la mezcladora.
- Step 2**  
Drain class water away from area to be repaired as shown and start mixer.  
Vacié el agua de enjuague lejos de la zona que va a reparar, como se muestra, y encienda la mezcladora.
- Step 3**  
SL™ requires 2 quarts of water total per 51 pound bag. Initially, add only 1 quart of water for each unit of SL™ to be mixed.  
SL™ requiere un total de 2 cuartos de galón de agua por cada bolsa de 51 libras. Al comenzar, agregue sólo 1 cuarto de galón de agua por cada unidad de SL™ que se va a mezclar.
- Step 4**  
With mixer turning, add pre-determined units of SL™.  
Con la mezcladora en funcionamiento, agregue unidades predeterminadas de DOLITE™. Mezcle durante un minuto.
- Step 5**  
Add to remaining 1 quart of water per bag of SL™.  
\*Agregue 1 cuarto de galón de agua restante por unidad de SL™.
- Step 6**  
Mix for at least 5 minutes and place.  
Seward and finish.  
**DO NOT RE-TEMPER WITH WATER.**  
Mezcle durante 5 minutos más, y termine. Pese la regla y acabe. **NO VUELVA TEMPLAR CON AGUA.**
- Step 7**  
Clean mixer or add water for next batch.  
Limpie la mezcladora o agregue agua para el próximo lote.

Mix water temps should be between 60°F/16°C - 70°F/21°C.  
La temperatura para la mezcla debe estar entre 60°F/16°C y 70°F/21°C.

In ambient temperatures less than 50°F/10°C, use warm water from 70°F/22°C to 90°F/32°C.  
En temperaturas ambiente inferiores a 50°F/10°C, use agua tibia de entre 70°F/22°C y 90°F/32°C.

In ambient temperatures greater than 85°F/29°C, use cool water from 50°F/10°C to 70°F/22°C.  
En temperaturas ambiente superiores a 85°F/29°C, use agua fría de entre 50°F/10°C y 70°F/22°C.

SL™ is a water to binder sensitive cement. NEVER use less than 2 quarts of water nor MORE THAN 2 1/4 quarts of water per 51 pound unit of SL™.  
SL™ es un cemento sensible a la proporción entre agua y aglomerante. NUNCA utilice menos de 2 cuartos de galón de agua ni MÁS DE 2 1/4 cuartos de galón de agua por cada unidad de 51 libras.

### WARRANTY:

CERATECH, Inc. ("CERATECH") warrants that its products are free from defects in materials and workmanship. If any CERATECH product fails to conform to this warranty, CERATECH will replace the product at no cost to the buyer or refund the purchase price, at CERATECH's election. Any warranty claim must be made within one (1) year from the date of the shipment of the product to the buyer. In no event shall CERATECH be liable to the buyer for any consequential or incidental damages of any nature. CERATECH MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF ITS PRODUCTS AND EXCLUDES THE SAME. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

CERATECH Inc.  
1500 North Beauregard St.  
Suite 320  
Alexandria, VA 22311  
Phone: (800)-581-8397 Fax: (703)-894-1068  
Technical Support: (888)-341-2600

State of West Virginia  
**VENDOR PREFERENCE CERTIFICATE**

Certification and application\* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

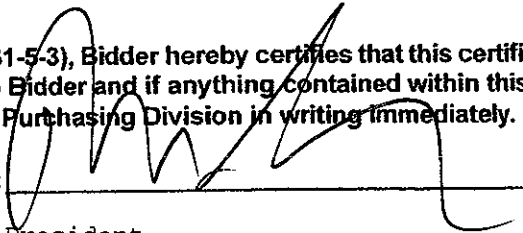
- 1. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,  
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,  
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
- 2. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
- 3. **Application is made for 2.5% resident vendor preference for the reason checked:**  
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
- 4. **Application is made for 5% resident vendor preference for the reason checked:**  
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
- 5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**  
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
- 6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**  
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Specialty Products, Inc  
By: Tres Swann

Signed:   
Title: President

Date: 04/04/2011

\*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No: 0311C209

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**West Virginia Code §5A-3-10a states:** No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**EXCEPTION:** The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

**WITNESS THE FOLLOWING SIGNATURE**

Vendor's Name: Specialty Products, Inc 5660 E. VA Beach Blvd, Norfolk, VA 23502

Authorized Signature: [Signature] Date: 4/4/2011

State of Virginia

County of Norfolk, to-wit:

Taken, subscribed, and sworn to before me this 4 day of April, 2011.

My Commission expires August 31, 2014.

**AFFIX SEAL HERE**

**NOTARY PUBLIC**

Catelyn Whaley  
7361241

by: Catelyn D. Whaley

