Masonry Cement
Samples 61 & 62

Please Note:

- Both of these cements are Type M, ASTM C91 Masonry cements.
- Please allow until August 22nd for receipt of samples.
- Closing date for test results is September 26, 2008 (October 3rd for 28-day results).
- Please provide the brand of filter paper used for the water retention test.

August 5, 2008

TO: Participants in the CCRL Masonry Cement Proficiency Sample Program

SUBJECT: Masonry Cement Proficiency Samples No. 61 and No. 62

The current pair of Masonry Cement Proficiency Samples are being forwarded by FedEx Ground to domestic addresses. Various methods are being used for international shipments. These samples are packaged in separate boxes and each contains approximately 7,200 g material. The boxes are labeled to identify the sample. You must label each bag of cement with the sample number when removing the cement from the box.

Please allow until August 22, 2008, for receipt of these samples. If the samples have not been received on this date or if the samples you receive are damaged, notify us by sending email to ccrl@nist.gov or by calling 301-975-6704. Replacement samples will forwarded.

These tests should be conducted as soon as possible after the samples are received, and the test results should be promptly reported to CCRL upon completion of testing. Test results should be entered at our website: http://www.ccrl.us/. The closing date for test results will be September 26, 2008. The results for 28-day tests will be accepted until October 3, 2008.

A final report containing scatter diagrams, average values, standard deviations, laboratory ratings and other pertinent information, will be available at our website. Notice and information about the final report will be sent by email.

Instruction covering the proposed tests, and the necessary data sheets for reporting the test results are on the following pages. Please read these carefully before testing.

Additional samples of this sample pair and past CCRL samples are available for sale. These samples can be used for research, technician training, and test equipment verification. Contact us for availability and pricing.

Sincerely,

Robin K. Haupt

Robin K. Haupt
Supervisor, PSP
Cement and Concrete Reference Laboratory
Materials and Construction Research Division
Building and Fire Research Laboratory

CCRL PROFICIENCY SAMPLE PROGRAM
MASONRY CEMENT
SAMPLES NO. 61 AND NO. 62

INSTRUCTIONS FOR TESTING

The two samples for the tests are packaged in separate boxes, each of which contains approximately 7,200 grams of cement. The material for the odd numbered sample represent one cement, and the material for the even numbered sample represent another cement. The odd and even numbered samples should not be combined. Cement type, mass per bag of cement, mortar proportions are provided in the following table. The information in this table reflects the latest version of C91.

	Masonry Cement No. 61 Type M		**Masonry Cement No. 62 Type M**	
	Cement	**Standard Sand**	**Cement**	**Standard Sand**
Proportions by Volume	1	3	1	3
Bag Mass	36 kg		36 kg	
Mass of material	540 g	1620 g (810 g graded, 810 g 20 - 30)	540 g	1620 g (810 g graded, 810 g 20 - 30)
Water	Add to obtain flow of 110±5		Add to obtain flow of 110±5	

TESTS

Prior to testing, pass the cement for the tests through a No. 20 sieve in accordance with ASTM Specification C183.

Insofar as your laboratory is prepared to do so, make indicated tests on each sample in accordance with the current ASTM Methods designated below, but as modified by ASTM C91-05

Normal Consistency	ASTM C187-04
Time of Setting, Gillmore	ASTM C266-04
Soundness, Autoclave	ASTM C151-05
Air Content	ASTM C185-02
Compressive Strength (6 cube batch)	ASTM C109-05
Fineness, by the 45-µm Sieve	ASTM C430-96
Water Retention	ASTM C 1506-03
Density	ASTM C188-95

It is preferred that the same operator make the same tests on both samples, on the same day. The results of a single determination should be reported rather that the average of duplicate determinations.

INSTRUCTIONS FOR REPORTING

For the sake of uniformity, report the values for the various tests to the nearest significant number indicated on the reporting forms.

Test results should be entered at our website: http://www.ccrl.us/. The closing date for test results will be September 26, 2008. The results for 28-day tests will be accepted until October 3, 2008.

CCRL PROFICIENCY SAMPLE PROGRAM
MASONRY CEMENT TESTS REPORT FORM
SAMPLES NO. 61 & NO. 62

RETURN TO: R.K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____
_____
_____
_____
_____
e-mail: _____
Check here if name or address has changed _____

☐ check here if test results also submitted at CCRL data entry web

TEST RESULTS
Report Results as Indicated in ( )

	Sample No. 61	Sample No. 62	
NORMAL CONSISTENCY:			
Water *(nearest 0.1 percent by weight of cement)*			[110]
GILMORE TIME OF SETTING:			
Initial Set, Report in **minutes** *(nearest 5 minutes)*			[130]
Final Set, Report in **minutes** *(nearest 5 minutes)*			[140]

AUTOCLAVE EXPANSION:	No. 61	No. 62	
Final Reading			
Initial Reading			
Difference			
Percent Expansion *(nearest 0.01 percent)*			[160]

AIR ENTRAINMENT:			
Percent Air *(nearest 0.1 percent)*			[170]
Mixing Water *(nearest 0.1 percent by weight of cement)*			[180]
Flow Obtained *(nearest percent)*			[190]

COMPRESSIVE STRENGTH:		No. 61	No. 62	
7-day, total load, lbs.	1)			
	2)			
	3)			
Average *(nearest 10 psi)*				[210]
28-day, total load, lbs.	1)			
	2)			
	3)			
Average *(nearest 10 psi)*				[211]

FINENESS: 45-µm (No. 325) Sieve, corrected percent retained
(*nearest 0.01 percent)* _____ _____ [281]

	No. 61	No. 62
Correction Factor for 45 µm sieve *(nearest 0.1 percent)*		

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ Fax _____ CCRL Laboratory Number _____

CCRL PROFICIENCY SAMPLE PROGRAM
MASONRY CEMENT TESTS REPORT FORM
SAMPLES NO. 61 & NO. 62

RETURN TO: R.K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

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Check here if name or address has changed _____

☐ check here if test results also submitted at CCRL data entry web

TEST RESULTS
Report Results as Indicated in ( )

	Sample No. 61	Sample No. 62	
DENSITY: *(nearest 0.01 g/cm^3)*			[310]
WATER RETENTION:			
Mixing water, *(nearest 0.1 percent by weight of cement)*			[330]
Initial flow, *(nearest percent)*			[331]
Final flow, *(nearest percent)*			[332]
Water retention, *(nearest percent)*			[333]

Type of Vacuum Indicator used with Water Retention Apparatus: ☐ vacuum gage ☐ mercury manometer

Filter Paper used (brand and number): ☐ Humboldt ☐ SS 576 ☐ Whatman

☐ other (please specify) _____

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ Fax _____ CCRL Laboratory Number _____

CCRL MASONRY CEMENT PROFICIENCY SAMPLE PROGRAM
28-DAY TEST RESULTS REPORT FORM
SAMPLES NO. 61 & NO. 62

RETURN TO: R.K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____
_____
_____
_____
_____
e-mail: _____
Check here if name or address has changed _____

☐ check here if test results also submitted at CCRL data entry web

TEST RESULTS
Report Results as Indicated In ( )

NOTE: 28-day test results must be received no later than October 3, 2008.

		Sample No. 61	Sample No. 62
COMPRESSIVE STRENGTH:	**No. 61** / **No. 62**		
28-day, total load, lbs.	1) _____ _____		
	2) _____ _____		
	3) _____ _____		
Average *(nearest 10 psi)*		_____	_____ [211]

Remarks:

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ Fax _____ CCRL Laboratory Number _____