



June 10, 2003

Mr. William R. MacDonald  
Celcore/MaxFlow Corporaion  
775 US Highway 70 West  
Black Mountain, NC 28711

**Subject: Laboratory Test Results on Cellular Concrete  
ASTM C 796, Sections 8.10-8.13  
Celcore/MaxFlow Corp.  
MACTEC Project No. 6226-03-0507**

Dear Mr. MacDonald:

As authorized by your acceptance of our Work Authorization Sheet dated June 6, 2003, MACTEC Engineering and Consulting of Georgia, Inc. (MACTEC) has completed the requested laboratory testing on the submitted Cellular Concrete specimens. On June 4, 2003, the Charlotte laboratory received ten 6 by 12-in and three 3 by 6-in cellular concrete cylinders that were sampled, molded, stripped, and cured by a representative of Celcore/MaxFlow Corporation. The MACTEC Charlotte laboratory conducted the following ASTM tests listed below in conjunction with ASTM C 796, "Standard Test Method for Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam".

- Tensile Splitting Strength, ASTM C 496
- Compressive Strength, ASTM C 495
- Oven Dry Weight, ASTM C 495
- Water Absorption, ASTM C 796

The results of our testing are included as an attached "Summary of Laboratory Test Results" sheets.

We appreciate the opportunity of providing our services to you. If you have any questions pertaining to this report or need any additional information, please do not hesitate to contact this office at (704) 357-8600

Sincerely,

**MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.**

Handwritten signature of Mimi S. Hourani in black ink.

Mimi S. Hourani  
Laboratory Services Supervisor

Handwritten signature of Michael O. Hamlett in black ink.

Michael O. Hamlett  
Business Unit Leader

MSH/MOH:msh

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Summary of Laboratory Test Results  
 Celcore/MaxFlow Corp  
 MACTEC Project No. 6226-03-0507

Tensile Splitting Strength of Cellular Concrete, ASTM C 496

Sample No.	Average Diameter (in)	Average Length (in)	Maximum Load (lbs)	Splitting Tensile Strength (psi)
1	6.00	12.0	6,217	55
2	6.00	11.9	4,788	40
3	6.00	12.0	4,260	40
4	6.00	12.1	6,154	55

Rate of Loading on United Universal Machine: 0.10 in/min

Compressive Strength of Cellular Concrete, ASTM C 495

Sample No.	Average Diameter (in)	Average Length (in)	Maximum Load (lbs)	Compressive Strength (psi)
1	2.97	5.89	2,767	399
2	2.99	5.86	2,600	370
3	2.98	5.98	3,644	523

Rate of Loading on United Universal Machine: 0.05 in/min

Oven-Dry Density of Cellular Concrete, ASTM C 495

Sample No.	Average Diameter (in)	Average Length (in)	Final Oven-Dry Weight (g)*	Oven Dry Density (pcf)
1	5.99	11.99	2767.9	31.2
2	5.93	11.96	2876.1	33.2
3	5.99	11.99	2933.0	33.1
Average	5.97	11.98	2859.0	<b>32.5</b>

\*Weight determined after weight loss at 24-h intervals did not exceed 1%

Summary of Laboratory Test Results  
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Water Absorption of Cellular Concrete, ASTM C 796

Sample No.	Average Diameter (in)	Average Length (in)	Weight After 24-h Soaking (g)	Absorption, % by Volume
1	6.01	12.13	3697.4	NA
2	6.01	12.00	3461.4	NA
3	6.01	12.09	4144.7	NA
Average	6.01	12.07	3767.8	<b>16.2</b>