

ChemGrout®

“Equipment for Grouting Since 1969”

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Material Testing Results

Date: October 31, 2000

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Mr. Jay Endre

FCS Inc.

6585 Merchant Place #308

Warrenton, VA 20187

Subject: Material Test Report

Material: Guardian Chimney Lining Formula Type HT

Dear Mr. Endre:

Following is the test report on the mixing, pumping and spraying characteristics of the above referenced material as tested here at ChemGrout on February 4, 2000. We appreciate your confidence in our equipment and the opportunity to be of service to you.

Conditions: Outside Temperature 36 degrees F, Low humidity

Equipment Used: Model CG550/2C4/H
Power Hydraulic (10 GPM, 2000 PSI)

Mixing Water Temp: 48 degrees F

Batching Method: Two 60 lbs. bags of Guardian Chimney Lining HT were added to 10.0 gallons of water in a 44 gallon capacity paddle mixer with the paddle rotating at approximately 102 RPM. The material mixed rapidly and thoroughly within 30 seconds.

Pumping Method: The finished batch was pumped and recirculated through a 1" x 25' grout hose for 1-2 minutes, the successfully spray applied to a vertical 4'X 8' plywood panel to a thickness of approximately 1/8 to 1/4 inch.

Observations: Mixed, pumped and applied at a rate of approximately 4-5 GPM quite readily. Material discharge pressure was less than 25 psi and grout plant hydraulic pressure never exceeded 400 psi. At the end of the test, cleanup was accomplished quite easily.

Conclusion: Guardian Chimney Lining HT mixes well in a paddle type mixer and is easily pumped through the 2C4 pump with a minimum of energy expended. Although not tested through a 2L4 pump, based on observations this pump should work very well also. This material is graded "EXCELLENT" for application through all ChemGrout equipment.

Sincerely,

Guardian-Chimney-Lining-HT

Joe Schatz
ChemGrout, Inc.