

ChemGrout®

"Equipment for Grouting Since 1969"

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Material Testing Results

Date: August 8, 2000

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Manufacturer: Vesuvius - Buffalo
661 Willet Road
Buffalo, NY 14218

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Material: Triad 70R

Lot # 00FEB22DF

Material Application: No cement, castable, pumpable, Steel & Iron refractory material.

Mfg. Plant: Aurora, IL

Std. Bag Weight: 55 #

Testing Conditions: Outside Temperature: 82.5°F

Humidity: 61%

Equipment Used: Model: CG570
Mixer: Paddle

Pump: 2TJ6 Progressing Cavity
Power: Hydraulic

Std. Mix Ratios: 9% water

Water Temp: 77.8 °F

Batching Method: Quantity Material: 165 lbs.

Quantity Water: 15 lbs

Mixing Time: 240 Seconds

Batch Temp: N/A °F

Specific Gravity: SG = 2.53

Flow Cone N/A Seconds

Pumping Method: Recirculated through hose, recorded pressures at various flow rates.

Flow Rate/Pressure:	Flow Rate	Pressure	Flow Rate	Pressure
Hose (12.5' Long x 1 1/4" I.D.)	4.3 GPM	30 PSI	GPM	PSI
Hose ()	6.5 GPM	35 PSI	GPM	PSI
Hose ()	8.6 GPM	40 PSI	GPM	PSI
Hose ()	12.6 GPM	48 PSI	GPM	PSI
Hose ()	14.5 GPM	50 PSI	GPM	PSI
Hose ()	18.8 GPM	60 PSI	GPM	PSI
Hose ()	22.0 GPM	65 PSI	GPM	PSI
Hose ()	GPM	PSI	GPM	PSI
Hose ()	GPM	PSI	GPM	PSI
Hose ()	GPM	PSI	GPM	PSI

Observations: Took a long time to mix, batch got wetter as mixing continued, some large particals over 1/8", plastic type material once moving pumped well, material at rest took energy to start flowing again, once moving pumped well.

Results: ChemGrout rates the pumpability of this product as a "5" on a scale of 10, with 10 being the easiest. ChemGrout recommends a CG2TJ6 pump or higher.