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ARAGONITE

REACTIVITY AND ABSORPTION DATA

Performed by Hazen Research • Computing Calcium Utilization by TGA

LIMESTONE ANALYSIS (CALC)		SAMPLE WEIGHTS FROM TCA RUN		
COMPONENT	Wt.%			Wt.mg
$CaCO_3$	89.1	Initial Wt	WI	24.60
$MgCO_3$	2.55	Calcined Wt	Wc	13.60
Inserts + (OH)	6.38	Sulfated Wt (35 min)	Ws	23.72
Moisture	0.0			
Total	98.0			

Theoretical Calcined Weight (Wc)th:

(Wc)th = WI [56.080/100.091 x $CaCO_3$) + 40.312/84.323 x ($MgCO_3$) + Inerts] /100

= 14.15 versus 13.5 (Measured)

Theoretical Sulfated Weight (Ws)th:

(Ws)th = W I [136.144/100.91 x ($CaCO_3$) + 120.312 /84.323 x $MgCO_3$ + Inerts]/ 100

Computed TGA Calcium Utilization:

U = Ws - Wcx 100 / (Ws)th - Wc

= 70.4%

Reactiveness by Hazen TGA Procedure

5.2 lb sorbent/lb S

Excellent

STANDARDS FOR EVALUATING LIMESTONE:		HAZEN QUALITATIVE	RANKING SCALE
CALCIUM UTILIZATION	REACTIVENESS	RANK	USAGE:LB SORBENT
>50%	High	Excellent	5-7
30-50%	Medium	Good	7-9
>30%	Low	Average	9-11
		Poor	11-15
		Bad	>15

Hazen Research, Inc.