

Bestwall Gypsum Company

FOR **Pauli Laboratory** DATE **September 18, 1958** FROM **Fort Dodge** OFFICE
ATTENTION OF **Mr. J. R. Watt** SUBJECT **BESTWALL LIGHT ACCOUSTICAL PLASTER**
ANSWERING YOURS DICTATED BY **L. V. Rodenborn - jl**

cc: Mr. Myron Read- Fort Dodge

RE: ACCOUSTICAL GRADE EXPANDED PERLITE

The 20 bags of Shundler Accoustical Grade Perlite has been received. Our test on this material, as well as our tests on the accoustical plaster made with this material follow:

Weight Per Bag

Net lbs.	1 31 1/4	2 31-3/4	3 31-3/4	4 31-3/4	5 31-3/4	6 31-3/4	7 31-3/4	8 31-3/4	9 31-3/4	10 30-3/4*
	11 31-3/4	12 31-3/4	13 31-3/4	14 31-3/4	15 31-3/4	16 31-3/4	17 31-3/4	18 31-3/4	19 31-3/4	20 31-3/4

Weight Per Cubic Foot

Bag lbs.	8 7 1/4	9 7 1/4	12 7-3/4	13 7 1/4	14 7-3/4	15 7 1/4	16 7 1/4	17 7 1/4	18 7 1/4	20 7 1/4
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Screen Analysis

Bag	#12	#13	#14
Lab. Wgt.	7.6	7.1	8.9
Frio Red	36%	38%	32.0
Sinks	3.4%	4%	2.0

	Percent	Frac.	Percent	Frac.	Percent	Frac.
	Frac.	Cuml.	Frac.	Cuml.	Frac.	Cuml.
+16	12.0	12.0	14.6	14.6	12.3	12.3
+20	23.4	35.0	21.5	36.1	25.8	38.1
+30	25.4	60.8	22.1	58.2	24.1	62.2
+50	16.3	77.1	17.5	75.7	16.2	78.4
+100	6.9	84.0	7.0	82.7	5.5	84.9
-100	16.0	16.0	17.3	17.3	15.1	15.1

Bag	#17	#18	#15
Lab. Wgt.	7.9	7.3	7.5
Fricometer Red.	34%	35%	37%
Sinks	3.4%	3.0%	5.6%

	Percent	Frac.	Percent	Frac.	Percent	Frac.
	Frac.	Cuml.	Frac.	Cuml.	Frac.	Cuml.
+16	15.0	15.0	10.8	10.8	12.5	12.5
+20	25.3	40.3	21.2	32.0	23.9	36.4
+30	22.7	63.0	24.0	56	24.9	61.3
+50	14.4	77.4	19.3	65.3	16.5	77.8
+100	6.0	83.4	7.7	83.0	6.0	83.8
-100	16.6	16.6	17.0	17.0	16.2	16.2

JRW
Schunders Acoustical Grade Perlite is quite a bit coarser than our regular perlite. I had thought it would be finer.

Bag
Lab Wgt.
Frio Redu.
Sinks

#8
7.6#
33%
3.4%

#9
7.7#
35%
4.6%

#20
7.5
35%
4.6

	Percent			Frac.			Percent			Frac.		
	Frac.	Cuml.	Density	Frac.	Cuml.	Density	Frac.	Cuml.	Density	Frac.	Cuml.	Density
+16	15.0	15.0	7.5	13.0	13		16.2	16.2	7.3			
+20	23.0	38.0	6.5	21.2	34.2		25.0	41.2	5.9			
+30	21.6	59.6	5.9	23.3	57.5		21.6	62.8	8.8			
+50	16.2	74.8	5.9	18.8	76.3		15.0	72.8	6.25			
+100	7.6	92.4	6.0	7.0	83.3		6.7	84.5	6.25			
-100	6.6	6.6	5.1	16.7	16.7		15.5	15.5	5.1			

Bag #16 was also used however we are unable to find the results of our tests on this bag.

#1 Regular Perlite

Water 21.0# W/P/R 210
Plaster 10.0# % Plaster in Mortar .3226
Weight per 1/8 cu.ft. 6.31# Per Cu.Ft. 50.48
Plaster per cu. ft. 16.28#
Cubic Feet. per ton plaster 122.8
Sq. Ft. per cu.ft. 1/2" thick 24 Sq.yds. per cu.ft. 1/2" thick 2-2/3
Sq. yards per ton 327.4 yds. or 6.54 yds. per 40# bag

#2 Regular Perlite

Water - 20.0# W/P Ratio 200
Plaster- 10.0# % plaster in mortar .333
Weight/1/8 cu.ft. 6.625 Per Cu.Ft. 53.0#
Plaster per cu.ft. 17.65
Cu. Feet per ton plaster 113.3
Sq. Yds. per cu.ft. 1/2" thick 2-2/3
Sq. Yds. per ton plaster 302 yds. or 6.04 yds. per 40# bag

#1 Shundlers Accoustical Perlite

Water 27.0 W/P ratio 270
Plaster 10.0# % plaster in mortar .2973
Weight 1/8 cu.ft. 6.25 1 cu.ft. 50.0#
Plaster per cu.ft. 14.86
Cu.Ft. per ton plaster 134.5
Sq. yds. per cu.ft. 1/2" thick 2-2/3
Sq. yds. per ton plaster 358.6 or 7.1 sq. yds. per 40# bag

#2 Shundlers Accoustical Perlite

Water 32.5# W/P ratio 325
Plaster 10.0# % plaster in mortar .2353
Weight 1/8 cu.ft. 6.4# Per cu.ft. 51.2
Plaster per cu.ft. 13.0#
Cubic Feet per ton plaster 154.0
Sq. yds. per cu.ft. 1/2" thick 2-2/3
Sq. yds. per ton plaster 410 or 8.2 sq. yds. per 40# bags

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SEP 20 1958

BESTWALL GYPSUM
COMPANY

T.C. was obtained by mixing 25 Grams of plaster with enough water to bring to T.C. Our results were as follows:

#1 batch using Shundlers Accoustical Grade	286
#2 batch using Shundlers Accoustical Grade	290
#1 batch using Regular Perlite	250
#2 batch using Regular Perlite	250

Our application tests were not very conclusive; it appeared to us that there was about the same amount of fissuring on both, neither one too bad. There was more tendency to slide on the base coat using the Shundlers, whether due to the extra amount of water used or our own technique we are not sure. We feel excessive troweling will cause drop outs. We could see very little difference in how they handled with the tools.

It seems there is about as many ways to apply accoustical plaster as there are plasterers. While in Waterloo we called on a hospital addition being plastered by Jack Wilson of Sioux City. Jack was using U.S.G. Andicoate, putting on a coat by hand on top of an unset brown coat. This he troweled as smooth as possible and then after completely dry he gave it two spray coats of accoustical plaster with his plaster master gun, going one way on the first coat and the other way on the second coat. He was obtaining a very nice looking job. He said this was the only way he was able to obtain a good looking job. I asked him if there wasn't a question of obtaining the accoustical correction and he said they never questioned the method of application or the amount of correction; only the appearance.

Frank Brothers are using Gold Bond Spraylite on the High School at Dubuque. Gold Bond lath and plaster were specified and they were not allowed to substitute. They have been having a lot of trouble using the Spraylite and used 10 bags of our accoustical which they said worked good; the idea was to try and get the inspectors to change. They were unsuccessful, however.

Aside from the 100 bag job Mr. Read reported on, we have not had any of our accoustical out in this area.

There is still some question of ageing. Bob Franks asked us if it aged in the bag. He said they used a few bags they had left over from the trial run, about 3 weeks later and he didn't think it worked near as well as when first tried. We told him we were using a preservative, but haven't had enough experience to give a positive answer.