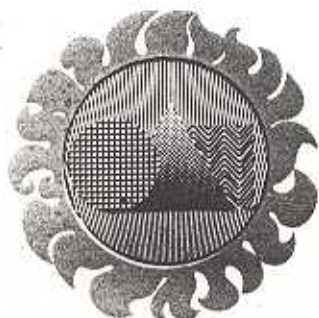




SPEAKMAN CENTRE FOR **MATERIALS** EVALUATION

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A SERVICE OF ONTARIO RESEARCH FOUNDATION

Building Performance Centre

FIELD INSPECTION OF SPRAY APPLIED MINERAL FIBRE INSULATION FOR DENSITY

Report No. 38-30656-2 (Final)

13 April 1987

for

Monoglass Incorporated
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Attention: Mr. Douglas R. Eyr1
President

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1. INTRODUCTION

At the request of Monoglass Incorporated, the Speakman Centre conducted a field inspection of two locations where Monoglass Inc. had installed their spray applied mineral fibre to obtain specimens for establishing their products nominal density in accordance with ASTM D1622-83 and CGSB 51-GP-36P (fifth draft).

The specimens were retrieved by Mr. David Bailey, the Speakman Centre's Technical Manager, from the following locations:

Location #1: Yonge and Sherwood, Toronto, Ontario.
Specimen #1 from the west wall on the second floor.
Specimen #2 from the east wall on the second floor.
Specimen #3 from the north wall on the second floor.

Location #2: The Granary, Oakville, Ontario.
Specimen #4 from parking level P3 close to the garage room door (horizontal).
Specimen #5 from parking level P2, south east corner, vertical beam.
Specimen #6 from parking level P3 at the east entrance, ceiling.

In addition to the above, we have also listed the test results obtained for density from the sample submitted for CMHC approval as reported in our report 38-30656-1 for comparative purposes. The CMHC sample was evaluated using both methods.

2. TEST RESULTS

A. Field Applied:

Location #1

<u>Specimen</u>	<u>Density (ASTM D1622-83)</u>			<u>lbs/ft³</u>
	<u>Volume (ml)</u>	<u>Weight (gm)</u>	<u>kg/m³</u>	
1	1,587.0	89.3	56.3	3.5
2	1,025.9	53.2	51.9	3.2
3	1,229.1	62.6	50.9	3.2
Mean			53.0	3.3
$\sigma(n-1)$			2.9	0.2

Location #2

<u>Specimen</u>	<u>Density (ASTM D1622-83)</u>			<u>lbs/ft³</u>
	<u>Volume (ml)</u>	<u>Weight (gm)</u>	<u>kg/m³</u>	
4	729.5	34.4	47.2	2.9
5	1,322.1	55.7	42.1	2.6
6	1,076.8	42.5	39.5	2.5
Mean			42.9	2.7
$\sigma(n-1)$			3.9	0.2

B. CMHC Sample:

<u>Specimen</u>	<u>Density (CGSB 51-GP-36P Fifth Draft)</u>			<u>lbs/ft³</u>
	<u>Volume (ml)</u>	<u>Weight (gm)</u>	<u>kg/m³</u>	
1	6,731.3	310.9	46.2	2.9
2	7,074.6	309.0	43.7	2.7
3	6,884.4	316.3	45.9	2.9
Mean			45.3	2.8
$\sigma(n-1)$			1.3	0.1

2. TEST RESULTS (contd.)

B. CMHC Sample:

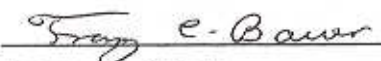
<u>Specimen</u>	<u>Density (ASTM D1622-83)</u>			
	<u>Volume (ml)</u>	<u>Weight (gm)</u>	<u>kg/m³</u>	<u>lbs/ft³</u>
1	3,356.8	176.8	52.7	3.3
2	3,377.1	161.9	47.9	3.0
3	3,300.1	171.3	51.9	3.2
Mean			50.8	3.2
$\sigma(n-1)$			2.6	0.2

3. CONCLUSION

As shown in the above Table, the mean density for locations #1 and 2, using the ASTM D1622 test method is 47.95 kg/m³ (3.0 lbs/ft³).

From the data obtained from the CMHC sample a difference of 5.5 kg/m³ (0.4 lbs/ft³) was noted in the mean test results between the ASTM and the CGSB methods. The same test specimens were used by both methods.

Therefore it can be concluded that the mean nominal density for the field applied mineral fibre, using the CGSB test method, is 42.45 kg/m³ (2.6 lbs/ft³).


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