



Acoustical Testing Laboratory



Accredited by the National Voluntary
Laboratory Accreditation Program
for the specific scope of accreditation
under Lab Code 200291

TEST REPORT

For

W. R. Grace
62 Whittemore Ave.
Cambridge, MA 02140
John Dalton / 617-498-4935

And

Arabian Vermiculite Industries
Dammam, Kingdom of Saudi Arabia

Sound Absorption Test
ASTM C 423 – 08a / ASTM E 795-05
On

Monokote® MK-6® HY® Fireproofing
Spray Applied to 1-1/2 Inches Thick on Steel Decking
(Type A Mounting)

Page 1 of 4

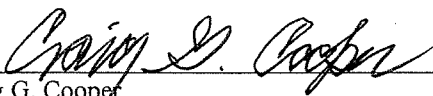
Report Number: NGC 4010006

Assignment Number: G-550

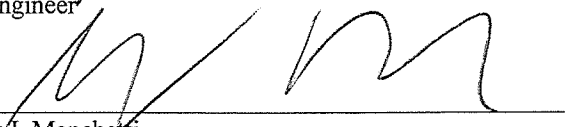
Test Date: 03/01/2010

Report Date: 03/16/2010

Submitted by:


Craig G. Cooper
Test Engineer

Reviewed by:


Robert J. Menchetti
Director

The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

This report may not be reproduced except in full, without the written approval of the laboratory.

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.



Acoustical Testing Laboratory



Accredited by the National Voluntary
Laboratory Accreditation Program
for the specific scope of accreditation
under Lab Code 200291

Page 2 of 4

Report Number: NGC 4010006

Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method - Designation: C 423 – 08a / E 795 - 05.

Specimen Description: Designated by the client as MONOKOTE® MK-6® HY® Fireproofing spray applied to 1-1/2 Inches depth on steel decking.

Observations: Face Finish: Observed to have a gray spray texture finish. Nominal 1.48 in. thick.

Core: Steel decking. 2 in. deep by 5 in. wide ribs.

Back Finish: 3/4 in. plywood. Decking screw attached to plywood.

Overall Thickness: 4-1/2 in. (114 mm)

Weight: 6.53 PSF (31.9 kg/m²) overall.

Unit Size: Three units = 96 in. x 36 in. (2438mm x 914mm).

Mounting: Type A Mount per ASTM E 795. All perimeter panel edges were covered with tape and straight edged nominal 2 x 4 ft. wood. Open seams were filled with dry MONOKOTE® mix.

Sample Size: 96-1/2 in. x 109-3/8 in. (2451mm x 2778mm)

Preconditioning: 48 hours at 70 deg. F, 55 % RH.

Test Results: The results of the tests are given on pages 3 and 4.

The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

This report may not be reproduced except in full, without the written approval of the laboratory.

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

Sound Absorption Test Data per C423 - 08a

Page 3 of 4

No. of test report: **NGC4010006**

Date of test: 3/1/2010

Temp. [°C]: 17.5

Humidity [%]: 62

Spec. Size [m²]: 6.810

Frequency [Hz]	Absorption Coefficients a_s	Avg. Decay Rate	
		Empty d (empty) [dB/s]	Specimen d (specimen) [dB/s]
100	0.30	10.05	12.75
125	0.41	9.86	13.49
160	0.47	7.89	12.09
200	0.51	7.58	12.15
250	0.48	7.74	12.03
315	0.53	7.07	11.84
400	0.60	6.76	12.16
500	0.66	6.62	12.51
630	0.67	6.61	12.63
800	0.70	6.20	12.48
1000	0.75	6.48	13.18
1250	0.76	6.87	13.68
1600	0.80	7.30	14.44
2000	0.83	8.17	15.61
2500	0.83	8.65	16.09
3150	0.84	8.40	15.93
4000	0.84	8.09	15.60
5000	0.82	7.39	14.72

Reverberation Room Volume: 282.1 m³

Noise Reduction Coefficient NRC: 0.70

Avg. 250, 500, 1000, 2000 Hz : **0.679**

Sound Absorption Average SAA: 0.68

Avg. 200 - 2500 Hz: **0.677**

NOTE: Estimates of repeatability and reproducibility for sound absorption coefficients
of a specimen are referenced in ASTM C423 - 08a test method.

The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

This report may not be reproduced except in full, without the written approval of the laboratory.

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

Sound Absorption Test Data per C423 - 08a

Page 4 of 4

Test report: **NGC4010006**

Date of test: 3/1/2010

Spec. Size [m²]: 6.81

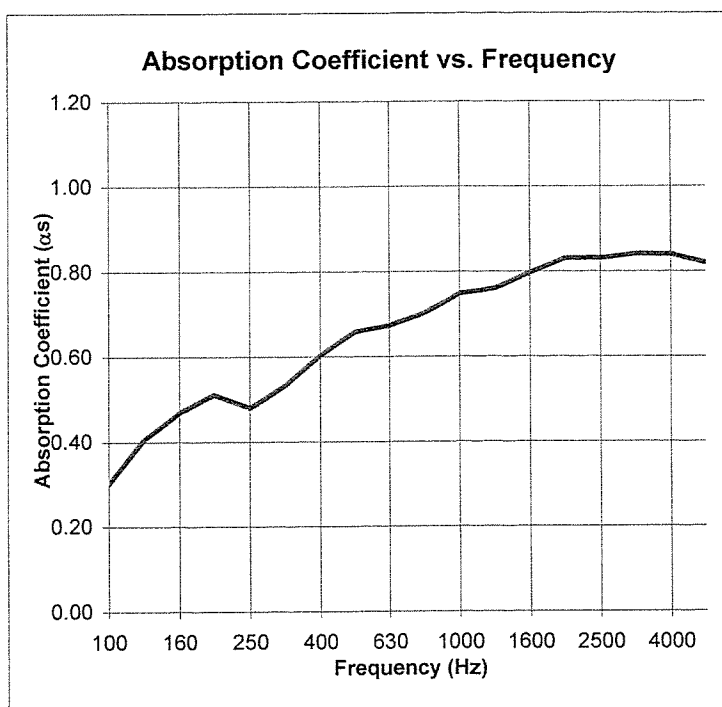
Room Vol.[m³]: 282.1

Temp. [°C]: 17.5

Humidity [%]: 62

Noise Reduction Coefficient NRC: 0.70
Sound Absorption Average SAA: 0.68

Frequency [Hz]	Absorption Coefficients α_s
100	0.30
125	0.41
160	0.47
200	0.51
250	0.48
315	0.53
400	0.60
500	0.66
630	0.67
800	0.70
1000	0.75
1250	0.76
1600	0.80
2000	0.83
2500	0.83
3150	0.84
4000	0.84
5000	0.82



The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

This report may not be reproduced except in full, without the written approval of the laboratory.

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.