



Test Report

Linear Shrinkage Measurement According to ASTM C356 on Lewco Super Mat Supplied by Lewco Specialty Products, Inc.

Prepared For:

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Report: <u>RD18871</u>

Stuart Ruis President

December 21, 2018

The test results in this report apply only to the specimens tested. The tests conform to the respective test methods except for the report requirements. The report includes summary data but a full complement of data is available upon request. This report shall not be reproduced, except in full, without written approval of R & D Services, Inc. This report must not be used by the client to claim product endorsement by R & D Services, Inc., IAS or any other organization.



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Linear Shrinkage of Thermal Insulation Report

Test Number: <u>RD182771LS</u>	Date of Test: <u>December 18 – 19, 2018</u>		
Specimen Number: <u>1916181128-1,3</u>	Date of Manufacture: <u>Unknown</u>		
Description of Test Specimen: Lewco Super Mat 16 mm			

Test Method: <u>ASTM C356-17, "Standard Test Method for Linear Shrinkage of Preformed</u> <u>High-Temperature Thermal Insulation Subjected to Soaking Heat"</u>

Report Prepared For: <u>Lewco Specialty Products, Inc. / Mr. Peter Zhou</u>

Background

The linear shrinkage of insulation due to exposure to short-term high temperature has been determined. The specimens are conditioned and exposed to high temperature conditions for 24 hours. The average linear shrinkage of four specimens is measured and used to calculate the linear shrinkage percent of the samples expressed as a percentage of the length and width measured before exposure.

Four samples approximately 151.6 by 64.7 by 14 mm were used. The test was conducted at 650 °C. Test measurements were actually obtained <u>after</u> the specimens were exposed to 650C for 24 hrs then allowed to cool to laboratory temperature.

Test Results

	Specimen 1	Specimen 2	Specimen 3	Specimen 4
Initial Length (mm)	151.6	151.5	152.0	151.3
Initial Width (mm)	64.6	64.8	64.7	64.5
Initial Thickness (mm)	14.31	13.60	15.02	13.95
Final Length (mm)	151.1	150.9	151.6	151.1
Final Width (mm)	64.9	64.4	64.7	64.5
Final Thickness (mm)	14.27	13.34	14.82	13.66
Change in Length (mm)	0.5	0.6	0.4	0.2
Change in Width (mm)	-0.3	0.4	0.0	0.0
Linear Shrinkage (%) Length	0.3	0.4	0.3	0.1
Linear Shrinkage (%) Width	-0.5	0.6	0.0	0.0

Result:

The average observed linear shrinkage of the test specimens was 0.3 % (Length) and 0.0 % (Width).

Reviewed By:

<u>12/21/18</u> Date: