

# TEST REPORT



Intertek

**REPORT NUMBER: 102670216COQ-003A**  
ORIGINAL ISSUE DATE: September 21, 2016

## EVALUATION CENTER

INTERTEK TESTING SERVICES NA LTD.  
1500 BRIGANTINE DRIVE  
COQUITLAM, BC V3K 7C1

## RENDERED TO

MONOGLASS INC.  
922-1200 WEST 73<sup>rd</sup> AVENUE  
VANCOUVER, BC V6P 6G5  
CANADA

PRODUCT EVALUATED: Monoglass Spray Applied Fiberglass Insulation  
EVALUATION PROPERTY: Cohesion/Adhesion

**Report of Monoglass Spray Applied Fiberglass Insulation tested  
in accordance with ASTM E736/E736M-00(2015)e1, *Standard Test  
Method for Cohesion/Adhesion of Sprayed Fire-Resistive  
Materials Applied to Structural Members***

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# 1 Table of Contents

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1	Table Of Contents .....	2
2	Introduction .....	3
3	Test Samples .....	3
3.1.	Sample Selection.....	3
3.2.	Sample And Assembly Description .....	3
4	Testing And Evaluation Methods .....	3
4.1.	Sample Preparation.....	3
4.2.	Conditioning.....	3
4.3.	Cohesion / Adhesion Strength.....	3
5	Testing And Evaluation Results .....	4
5.1.	Results And Observations .....	4
6	Conclusion .....	4
Appendix A	Test Data.....	2 Pages

## 2 Introduction

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Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Monoglass Inc. on a spray applied fiberglass insulation product. Testing was conducted in accordance with the following test method:

- ASTM E736/E736M-00(2015)e1, *Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members*

This evaluation was completed during the month of September 2016.

## 3 Test Samples

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### 3.1. SAMPLE SELECTION

The client submitted samples to the Evaluation Center on August 29, 2016. Samples were not independently selected for testing (Coquitlam ID# VAN1608291549-001).

### 3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The product was identified as the Monoglass Spray Applied Fiberglass Insulation.

## 4 Testing and Evaluation Methods

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### 4.1. SAMPLE PREPARATION

The client prepared all specimens to the required dimensions.

### 4.2. CONDITIONING

Before testing, all specimens were held in standard laboratory conditions for at least 24 hours at a temperature of  $23 \pm 2^{\circ}\text{C}$  and relative humidity of  $50 \pm 5\%$ .

### 4.3. COHESION / ADHESION STRENGTH

Cohesion/adhesion strength was determined in accordance with ASTM E736/E736M-00(2015)e1. The samples were sprayed onto 300 mm x 300 mm (12 in. x 12 in.) galvanized 16 ga. steel sheets to a thickness of 12 mm to 25 mm ( $\frac{1}{2}$  in. to 1 in.). Using a two-part component epoxy, a metal bottle screw cap with a 70 mm (2.75 in.) diameter and 12 mm ( $\frac{1}{2}$  in.) nominal depth was bonded to the insulation. After curing for 24 hours the bottle cap was pulled perpendicular to the surface of the insulation at a rate of 5 kg/min (11 lb/min). The cohesion/adhesion strength was calculated based on the area of the metal cap and the maximum load attained.

## 5 Testing and Evaluation Results

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### 5.1. RESULTS AND OBSERVATIONS

The test results for the fiberglass insulation product are shown in Table 1 below. A full set of test data is included in Appendix A.

Table 1. Test Results	
Property	Test Result
Cohesion/Adhesion Strength, psf	43


## 6 Conclusion

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The Monoglass Spray Applied Fiberglass Insulation product identified and evaluated in this report has shown the physical properties as outlined in Section 5 of this report.

### INTERTEK TESTING SERVICES NA LTD.

Reported by:   
Geri Nishio  
Senior Technologist, Building Products

Reviewed by:   
Baldeep Sandhu  
Manager, Building Products

## **APPENDIX A: Test Data (2 pages)**

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Company	Monoglass Inc.	Technician(s)	Geri Nishio
Project No.	G102670216	Reviewer	Baldeep Sandhu
Models	Monoglass Spray Applied Fiberglass Insulation	Start/End Date	September 19, 2016
Product Name	Same as above	Sample ID	VAN1608291549-001
Standard	<b>ASTM E736/E736M-00(2015)e1, <i>Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members</i></b>		

**Test Data Package**

**Table of Contents**

Sheet	Page
Table of Contents (This Sheet)	1
Cohesion/Adhesion	2



Test: **Cohesion/Adhesion**  
Date: 19-Sep-16  
Client: Monoglass Inc.  
Product: **"Monoglass" spray applied fiberglass insulation**  
Test Methods: ASTM E736-00(Re 2015) Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members  
Specimen Size: 12 x 4 x 1/2 inch 1/4" thick steel plate covered with sprayed insulation  
Conditioning: 48 hours at a temperature of 23 ± 2°C and 50 ± 5 % relative humidity  
Speed of Test: 11 lbs/minute (5 kg/min.)  
Equipment: Instron 8516 Universal tester (Intertek ID P60553; Cal. Due July 2017)

Project No: G102670216  
Eng/Tech: G. Nishio  
Reviewer: B. Sandhu

Specimen	Cap Area (in <sup>2</sup> )	Max Load (lbs)	Load (psf)	Load (Pa)	Mode of Failure
1	4.3	1.4	46	2201	cohesive failure
2	4.3	1.5	50	2404	cohesive failure
3	4.3	1.0	34	1642	cohesive failure
	Mean:	1.3	<b>43</b>	<b>2083</b>	
	StdDev:	0.2	8.2	394.4	
	COV:	18.9%	18.9%	18.9%	