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Impact Testing of Organic coated Glass in accordance with ANSI Z97.1-2009, CAN/CSGB-12.1-M90 and CPSC 1201

3M Renewable Energy
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Date: February 10, 2014
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Report Number: ESP015772P.1

3M SAFETY S80

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EAR-CONTROLLED DATA

INTRODUCTION:

The following report presents the results of impact testing of organic coated glass in accordance with the ANSI Z97.1-2009, National Standard of Canada CAN/CGSP-12.1-M90 and CPSC 1201 standards. Testing was requested by Paul Neumann of 3M Renewable Energy. The samples were received on January 17, 2014 and testing was completed by Josh Garrison on January 20, 2014.

SUMMARY OF RESULTS:

3M Safety S80 film when applied to nominal ¼" annealed glass **Complies** with the safety glazing impact requirements of ANSI Z97.1-2009, CAN/CSGB-12.1-M90 and CPSC 1201.

TEST METHODS AND RESULTS:

Impact Test

Specimens were kept at a temperature of 70-80° F for a minimum of four hours preceding the test. Specimens were impacted alternating on the glass side and the film side, as noted in the tables in the following results section. Each specimen was struck once within ½ inch of center, with a shot bag constructed in accordance with the specifications referenced, swinging in a pendulum arc, from a drop height shown below.

3M Safety S80 8 Mil						
Sample Identification	Impact Side	Total Thickness Inches	Drop Height Inches	Weight of 10 Largest Pieces	Weight of Largest Piece	Results/Size of Opening
#1	Film	0.232	48	76	13	Pass – No tears / No openings
#2	Glass	0.203	48	No particles large enough to weigh		Pass – No tears / No openings
#3	Film	0.232	48	51	14	Pass – No tears / No openings
#4	Glass	0.230	48	95	17	Pass – No tears / No openings

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CALIBRATED TEST EQUIPMENT:

- PT-173-032 Starrett Micrometer — Calibration Due: 11/07/2014
- PT-170-016 Chatillon Force Gauge — Calibration Due: 03/21/2014
- PT-173-018 Sartorius Scale — Calibration Due: 09/04/2014

DISPOSITION OF SAMPLE:

Samples were destroyed during testing and were disposed of immediately.

Respectfully submitted,

Josh Garrison
Engineering Technician

Brian S. Escherich
Operations Manager