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January 6, 2006

Audio Alloy LLC  
Midland, MI

Att: **Mr. Brian Ravnaas**

Re: **DL-14710A**

### **OBJECTIVE**

To determine the water vapor transmission properties of drywall sheeting when bonded with adhesive.

### **PRODUCTS TESTED**

Bonded drywall panels were submitted by Audio Alloy LLC. The drywall assemblies were identified as follows:

Panels "**Marked 1**" were produced by troweling a layer of "Green Glue" onto the drywall with a 1/8-inch V-notch trowel. The drywall layers were then compressed to produce a nearly uniform thin film of adhesive between the drywall panels.

Panels "**Marked 2**" were produced by applying "Green Glue" onto the drywall in the recommended application pattern from an adhesive cartridge. The drywall layers were then compressed, but the adhesive film does not cover 100% of the surface area.

In addition, drywall panels were included for evaluation with out the adhesive film layer. The **Control** drywall panels consisted of a one or single drywall layer and two or double drywall layer assembly.

### **PROCEDURE**

Testing was conducted in accordance with procedures outlined in ASTM Method E 96, "Water Vapor Transmission of Materials", Procedure A, (Desiccant Method).



**TEST RESULTS**

The water vapor transmission properties of the bonded and not bonded drywall assemblies are indicated below:

	<u>WVT</u> (grains   sq. ft.   hr.)	<u>WVP</u> (perms)
<b>Panels Marked 2</b> Green Glue, recommended cartridge application	1.3	3.1
Control one drywall layer	4.5	10.4
Control two drywall layers	3.3	7.6

**WVT - Water Vapor Transmission Rate**

**WVP - Water Vapor Permeance**



**TEST RESULTS**

The water vapor transmission properties of the bonded and not bonded drywall assemblies are indicated below:

	<u>WVT</u> (grains   sq. ft.   hr.)	<u>WVP</u> (perms)
<b>Panels Marked 1</b>		
Green Glue, 1/8-in. V-notch trowel	0.5	1.2
Control one drywall layer	4.5	10.4
Control two drywall layers	3.3	7.6

**WVT - Water Vapor Transmission Rate**  
**WVP - Water Vapor Permeance**

DL Labs, Inc.

A handwritten signature in black ink, appearing to read 'Miss Lopez', is written over a light blue horizontal line.

Assistant Technical Director

cc: T. J. Sliva