



# CONSTRUCTION MATERIALS

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## TECHNOLOGIES

### LABORATORY TEST REPORT

**Report for:** United Plastics Corporation  
511 Hay Street  
P.O. Box 807  
Mount Airy, NC 27030

**Attention:** John Bishop

<b>Product Name(s):</b> dBMax	<b>Manufacturer:</b> United Plastics Corporation
<b>PRI-CMT Project No.:</b> UCP-003-02-01	<b>Source:</b> United Plastics Corporation
<b>Date Received:</b> October 21, 2015	<b>Dates Tested:</b> Oct. 28 – Nov. 20, 2015

**Purpose:** Determine the water vapor transmission and permeance of samples provided in accordance with **ASTM E 96/E 96M: *Standard Test Methods for Water Vapor Transmission of Materials.***

**Test Methods:** Testing was completed as described in ASTM E 96/E 96M-14: *Standard Test Methods for Water Vapor Transmission of Materials.* Five (5) specimens were prepared and tested at 73.4±3.6°F and 50±2% relative humidity in accordance with Procedure B, *Water Method.* Test specimens were excised from a larger, client-supplied piece of material and sealed along sides and to the cup with wax.

**Sampling:** Samples were received from on October 21, 2015 from Mount Airy, NC. dBMax is a flooring underlayment product. Shurtape was also provided as a joint treatment for dBMax.

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**Results:**

**Table 1: ASTM E 96 results**

Test Sample	Test Method	Property	Specimen Results					Average
			#1	#2	#3	#4	#5	
dBMax As Received; 50±5%RH @ 74±4°F Backside (Fleece) to ↑ P <sub>v</sub>	ASTM E 96 Procedure B	WVT (grains/h-ft <sup>2</sup> )	0.016	0.014	0.021	0.016	0.017	0.017
		Permeance (Perms)	0.04	0.04	0.05	0.04	0.04	0.04
dBMax w/Shurtape <sup>1</sup> As Received; 50±5%RH @ 74±4°F Backside (Fleece) to ↑ P <sub>v</sub>	ASTM E 96 Procedure B	WVT (grains/h-ft <sup>2</sup> )	0.022	0.021	0.014	0.021	0.019	0.020
		Permeance (Perms)	0.05	0.05	0.03	0.05	0.05	0.05

Note(s): 1) The exposed area was scaled to simulate Shurtape applied to the side joint of the dBMax underlayment every 3-ft

**Statement of Attestation:**

The results of testing were determined in accordance with ASTM E 96/E 96M-14: *Standard Test Methods for Water Vapor Transmission of Materials* as described herein. The laboratory test results presented in this report are representative of the material supplied.

Signed:   
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 Zachary Priest, P.E.  
 Director

**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	11/16/2015	4	NA

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**TEST DATA WORKSHEET**  
**ASTM E96: Standard Test Methods for Water Vapor Transmission of Materials**

Client:	United Plastics Corporation	PRI-CMT Project ID:	UPC-003-02-01
Product Name:	dbMax	Miami-Dade Notification:	
Product Description:	flooring underlayment	Procedure:	ASTM E96; Method B, Water

**Test Conditions:**

Temperature: 73.0 °F  
 Humidity (High): 100 %RH  
 Humidity (Low): 50 %RH

Cup Size: 0.066813385 in<sup>2</sup>

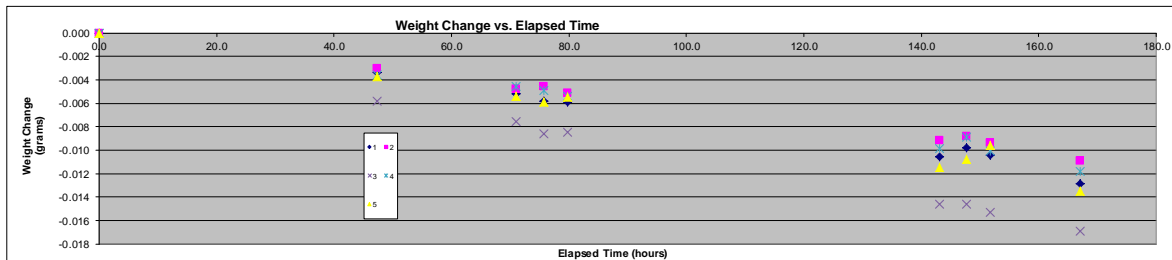
Description: Test specimens were excised from larger samples and securely mounted into/onto perm cups containing water. Prepared specimens were placed in the constant temperature, constant humidity controlled environment to complete testing.

**Test Data:**

Date	Elapsed (hrs)	Sample ID: 1			Sample ID: 2			Sample ID: 3			Sample ID: 4			Sample ID: 5		
		Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used
11/3/15 8:23 AM	0.0	130.3566	0.000	*	131.2689	0.000	*	136.4376	0.000	*	131.7627	0.000	*	139.3580	0.000	*
11/5/15 7:44 AM	47.3	130.3532	-0.003	*	131.2659	-0.003	*	136.4318	-0.006	*	131.7591	-0.004	*	139.3543	-0.004	*
11/6/15 7:25 AM	71.0	130.3514	-0.002	*	131.2641	-0.002	*	136.4300	-0.002	*	131.7581	-0.001	*	139.3526	-0.002	*
11/6/15 12:03 PM	75.7	130.3508	-0.001	*	131.2643	0.000	*	136.4290	-0.001	*	131.7578	0.000	*	139.3521	0.000	*
11/6/15 4:12 PM	79.9	130.3507	0.000	*	131.2638	0.000	*	136.4291	0.000	*	131.7573	-0.001	*	139.3525	0.000	*
11/9/15 7:30 AM	143.1	130.3460	-0.005	*	131.2597	-0.004	*	136.4230	-0.006	*	131.7528	-0.004	*	139.3465	-0.006	*
11/9/15 12:03 PM	147.7	130.3468	0.001	*	131.2601	0.000	*	136.4290	0.000	*	131.7538	0.001	*	139.3472	0.001	*
11/9/15 4:06 PM	151.7	130.3462	-0.001	*	131.2595	-0.001	*	136.4223	-0.001	*	131.7526	-0.001	*	139.3484	0.001	*
11/10/15 7:24 AM	167.0	130.3437	-0.002	*	131.2580	-0.001	*	136.4207	-0.002	*	131.7509	-0.002	*	139.3445	-0.004	*

Graphical Analysis Override	Data Set	Start Point
	1	1
	2	1
	3	1
	4	1
	5	1

Sample:	1	2	3	4	5
Area (ft <sup>2</sup> ):	0.066813385	0.066813385	0.066813385	0.066813385	0.066813385
G/T (grains/h):	0.001	0.001	0.001	0.001	0.001
RSQ:	0.9644	0.9858	0.9953	0.9715	0.9224
WVT (grains/h-ft <sup>2</sup> ):	0.015	0.014	0.021	0.016	0.017
Temp. (°F):	73.0	73.0	73.0	73.0	73.0
%RH (high):	100	100	100	100	100
%RH (low):	50	50	50	50	50
Permeance (perms):	0.04	0.04	0.05	0.04	0.04
Thickness:	0.000	0.000	0.000	0.000	0.000
Permeability (perm-inch):	0.000	0.000	0.000	0.000	0.000



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**TEST DATA WORKSHEET**  
**ASTM E96: Standard Test Methods for Water Vapor Transmission of Materials**

Client:	United Plastics Corporation	PRI-CMT Project ID:	UPC-003-02-014
Product Name:	DBMax and Shurtape	Miami-Dade Notification:	
Product Description:	dbMax and Shurtape Assembly	Procedure:	ASTM E96: Method B, Water

**Test Conditions:**

Temperature:	73.0	°F
Humidity (High):	100	%RH
Humidity (Low):	50	%RH

Cup Size: 0.066813385 in<sup>2</sup>

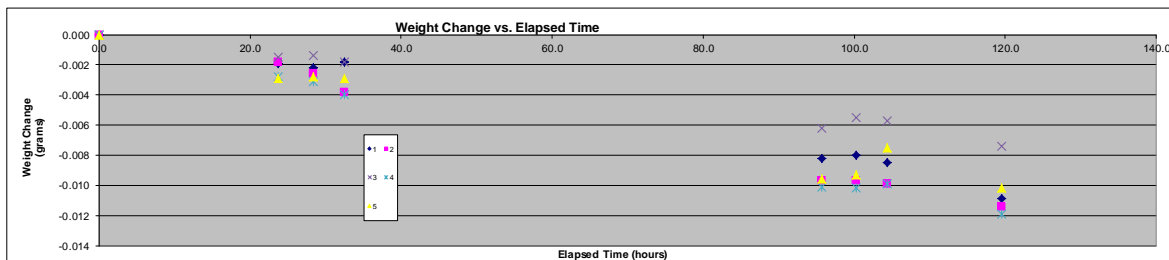
Description: Test specimens were excised from larger samples and securely mounted into/onto perm cups containing water. Prepared specimens were placed in the constant temperature, constant humidity controlled environment to complete testing.

**Test Data:**

Date	Elapsed (hrs)	Sample ID: 1			2			3			4			5		
		Thickness (mil)	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)	Used	Measured Weight (g)	Weight Change (g)
11/5/15 7:47 AM	0.0	132.2976	0.000		133.5997	0.000		128.6681	0.000		130.0842	0.000		135.7325	0.000	
11/6/15 7:28 AM	23.7	132.2957	-0.002		133.5979	-0.002		128.6666	-0.002		130.0814	-0.003		135.7296	-0.003	
11/6/15 12:06 PM	28.3	132.2954	0.000	*	133.5971	-0.001	*	128.6667	0.000	*	130.0811	0.000	*	135.7297	0.000	*
11/6/15 4:15 PM	32.5	132.2958	0.000	*	133.5959	-0.001	*	128.6663	0.000	*	130.0802	-0.001	*	135.7296	0.000	*
11/9/15 7:32 AM	95.7	132.2894	-0.006	*	133.5900	-0.006	*	128.6619	-0.004	*	130.0741	-0.006	*	135.7229	-0.007	*
11/9/15 12:06 PM	100.3	132.2896	0.000	*	133.5900	0.000	*	128.6626	0.001	*	130.0740	0.000	*	135.7232	0.000	*
11/9/15 4:12 PM	104.4	132.2891	-0.001	*	133.5888	0.000	*	128.6624	0.000	*	130.0743	0.000	*	135.7250	0.002	*
11/10/15 7:21 AM	119.6	132.2867	-0.002	*	133.5883	-0.001	*	128.6607	-0.002	*	130.0723	-0.002	*	135.7223	-0.003	*

Graphical Analysis Override	Data Set	Start Point
	1	1
	2	1
	3	1
	4	1
	5	1

Sample:	1	2	3	4	5
Area (ft <sup>2</sup> ):	0.066813385	0.066813385	0.066813385	0.066813385	0.066813385
Gt (grains/h):	0.001	0.001	0.001	0.001	0.001
RSQ:	0.9843	0.9919	0.9734	0.9902	0.9227
<b>WVT (grains/h-ft<sup>2</sup>):</b>	<b>0.022</b>	<b>0.021</b>	<b>0.014</b>	<b>0.021</b>	<b>0.019</b>
Temp. (°F):	73.0	73.0	73.0	73.0	73.0
%RH (high):	100	100	100	100	100
%RH (low):	50	50	50	50	50
Permeance (perms):	0.05	0.05	0.03	0.05	0.05
Thickness:	0.000	0.000	0.000	0.000	0.000
Permeability (perm-inch):	0.000	0.000	0.000	0.000	0.000



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