

Client: **Polymer Nation**
 Project: **P-99 with color**
 Contact: **Mike Douglass**
Technical Director

CTLGroup project no.: **232959**
 CTLGroup project mgr.: **D. Adams**
 Analyst/Technician: **M. Klaric**
 Approved: **D. Adams**
 Report Date: **July 12, 2024**

ASTM E96-24 Standard Test Method for Gravimetric Determination of Water Vapor Transmission Rate of Materials

RESULTS

P-99 0.074 net perms (grains h⁻¹ ft² in Hg⁻¹)

SPECIMEN PHOTOGRAPH

SPECIMEN INFORMATION

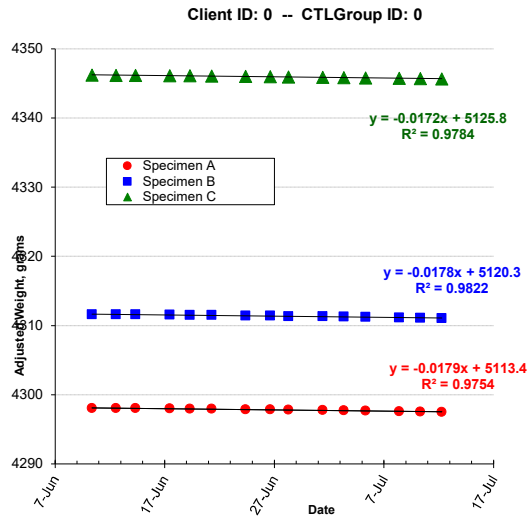
Client ID **P-99**
 CTLGroup ID **P-99**
 Material type **Epoxy**
 Concrete cast date **March 18, 2024**
 Moist cure **3 days**
 Drying **64 days**
 Surface Profile **CSP-2**
 Coating Applied **May 21, 2024**
 Concrete thickness, in. **1-in.**
 Ave. Coating thickness, in. **0.016**
 Exposed area, in². **54.3**
 Mix Ratio A:B (wt:wt) **2.25:1**
 No. Coats **1**
 No. Grams/Coat **20.35**
 Balance **EX6202/E s/n C341942644**
 Last Calibration **February 7, 2024**
 Prepared by **M. Klaric**



RAW DATA COLLECTED

Specimen A		Specimen B		Specimen C	
date	wt, grams	date	wt, grams	date	wt, grams
6/10/24 8:39	4298.08	6/10/24 8:39	4311.64	6/10/24 8:39	4346.21
6/12/24 12:59	4298.05	6/12/24 12:59	4311.61	6/12/24 12:59	4346.17
6/14/24 7:59	4298.03	6/14/24 7:59	4311.58	6/14/24 7:59	4346.15
6/17/24 10:34	4297.96	6/17/24 10:35	4311.52	6/17/24 10:35	4346.08
6/19/24 6:46	4297.90	6/19/24 6:46	4311.46	6/19/24 6:47	4346.06
6/21/24 6:35	4297.86	6/21/24 6:35	4311.41	6/21/24 6:35	4345.98
6/24/24 9:02	4297.81	6/24/24 9:03	4311.36	6/24/24 9:03	4345.94
6/26/24 14:57	4297.77	6/26/24 14:57	4311.32	6/26/24 14:57	4345.89
6/28/24 7:05	4297.72	6/28/24 7:05	4311.25	6/28/24 7:06	4345.86
7/1/24 9:52	4297.60	7/1/24 9:53	4311.15	7/1/24 9:53	4345.73
7/3/24 8:04	4297.58	7/3/24 8:04	4311.14	7/3/24 8:04	4345.71
7/5/24 7:36	4297.52	7/5/24 7:36	4311.08	7/5/24 7:36	4345.67
7/8/24 9:23	4297.40	7/8/24 9:23	4310.96	7/8/24 9:23	4345.56
7/10/24 7:18	4297.36	7/10/24 7:18	4310.93	7/10/24 7:18	4345.51
7/12/24 6:12	4297.28	7/12/24 6:13	4310.84	7/12/24 6:13	4345.42

ADJUSTED DATA GRAPH



Results linear in shaded range used for calculations.

CALCULATION OF RESULTS

	Water Vapor Transmission, grams h ⁻¹ m ²			Specimen A	Specimen B	Specimen C	All Specimens	Net Perms, Corrected for Concrete Substrate grains h ⁻¹ ft ² in Hg ⁻¹
	Specimen A	Specimen B	Specimen C					
P-99	0.0213	0.0212	0.0204	0.074	0.073	0.070	0.072	0.074
Control Concrete	0.70	0.69	0.77	2.4	2.4	2.7	2.5	--
Aluminum Blanks	<0.001	<0.001	--	<0.01	<0.01	--	<0.01	--

Notes

- Water Method with coated side facing 50%RH/73 °F and bottom side over water. Specimens exposed over 6.75 x 10.75 x 1.0-in. stainless steel flanged pans using SM5143 vacuum sealant tape. Results are specifically for these test conditions
- Permeance in PERMS (grains h⁻¹ ft² in Hg⁻¹) applies to specimens at thickness tested.
- Net permeance is calculated from the sum of the inverse perm values. These are a measure of resistance to moisture vapor movement: 1/Perm_(total) = 1/Perm_(concrete) + 1/Perm_(coating)
- Uncoated concrete substrate (0.6 w/c) and aluminum blanks are used as control specimens.
- Calculation by least squares linear regression analysis per ASTM E96-24 Sect. 15.
- These results represent specifically the samples submitted for testing. This report may not be reproduced except in its entirety.