



# IPS TESTING

Test Report  
January 26, 2021  
Page 1 of 11  
SGS-IPS 00048-21

Report to: Onur Bag  
NARKONTEKS TEKSTIL IHR.ITH.SAN.VE TIC.A.S.  
DOGUS CD. 3/19 SK. NO:12, Begos 35160  
Buca/Izmir  
Turkey

Sample Description: **One Protective Gown Sample**

Date Received: January 11, 2021

Test(s) Requested: Trap Tear Dry, MOCON


PO Number: Wire Transfer

## Analysis of One Protective Gown Sample

SGS-IPS Testing performed the testing listed above on one protective gown sample provided by NARKONTEKS TEKSTIL IHR.ITH.SAN.VE TIC.A.S. The results are summarized in Tables 1 and 2 on the following pages. Individual printouts from the MOCON instrument are attached at the end of this report

If you have any questions, please contact us. SGS-IPS Testing is an ISO 9001 certified lab issued by ABS Quality Evaluations, with additional ISO 17025 accreditation in the field of testing issued by ANAB which applies to Trap Tear Dry.

Authorized by

  
Jennifer Goggans  
Laboratory Manager

Signed

  
Eric Belter  
Lab Technician  
Analytical Services  
920-749-3040

Table 1. Tensile Properties



Orientation	PROTECTIVE GOWN 9040	
	MD	CD
Trap Tear Dry		
<div style="display: flex; justify-content: space-around; align-items: center;">   <div style="text-align: right;"><b>AT-1659</b></div> </div>		
Tearing Force (N)		
Average	27.1	55.7
Std. Dev.	2.94	2.23
Maximum	30.7	58.3
Minimum	22.8	53.4
n=	5	5
Crosshead Speed (mm/min)		
	300.0	300.0
Initial Clamp Separation (mm)		
	25	25

Table 2. MOCON

PROTECTIVE GOWN 9040	
Transmission Rate (g/m <sup>2</sup> *day)	
1	755
2	700
3	708
4	674
5	741
6	767
Average	724
Std. Dev.	35.8
Maximum	767
Minimum	674
n=	6

Method(s) and Notes:

All valid results are included in the statistical analyses.

Revisions of SGS-IPS methods when used are current at the time of testing.

Samples tested and conditioned in TAPPI standard conditions unless requested otherwise by customer or otherwise specified.

Samples were not preconditioned.

ASTM D 5733 - 99 (Reapproved 2004 w/d 2008) Standard Test Method for Tearing Strength of Nonwoven Fabrics by the Trapezoid Procedure

ASTM D 6701-16 Standard Test Method for Determining Water Vapor Transmission Rates Through Nonwoven and Plastic Barriers

Instrument Used: Permatran W Model 101K Water Vapor Permeability.

Test method requires a copy of the printout from the instrument included in the report.

Statistical Analysis is not reported for this test method.

The rate of water vapor transmission ranges between 500 to 100,000 (g/[m<sup>2</sup>\*d]) through nonwoven and plastic barrier materials. Results outside this range are considered out of instrument tolerance.

Results less than 500 (g/[m<sup>2</sup>\*d]) are reported as <500.

Thickness is not measured.

MOCON instrument reports a permeation value not required by ASTM D6701.

Testing was completed on the outside of the gown.

Analyzed by: EB

Quality review by: JVP

Date(s) of testing: January 14-26, 2021

### Room Conditions

	Relative Humidity (%)	Temperature (°F)
Conditioning Environment	50.7	73.2
Maximum during testing	50.7	73.2
Minimum during testing	50.5	73.2

**Note:** See the method(s) cited above for available estimates of measurement uncertainty.  
Unless otherwise noted, sampling was performed by customer.

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## **Parameters and Instruments Appendix**

### **Trap Tear Dry**

10 - 100 N range load cell on a Tensile Tester of type: MTS Criterion 43 using TestWorks  
4.12F 1025

PROTECTIVE GOWN 9040

# MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab

Material Id: 00048-21.001.001 Test Number: ASTM D6701 002651

Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

## MODULE INFORMATION:

Module 1. Serial: MK 01087  
Setup Name: 4STM 3806  
Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
Barometric Pressure: Auto: 727.86 mmHg

Flow Rate: Auto: 98.65 SCCM  
Cal C Flow Rate: 102.50 SCCM  
Ambient Temp: Manual: 23.0 °C.

## CELL A INFORMATION:

Sample Type: Film: 10 cm². 1 mil  
Test Mode: Convergence By Cycles  
Control Params: Min 2 Cycles  
Exam Minutes: 3  
Cal C Mode: Use Last: 11795.17  
Conditioning: Disabled  
Cycles Complete: 3  
Current Status: Test Done  
Started Testing: 1/14/2021 3:44:12 PM  
Elapsed Time: 0:27

## TEST RESULTS

## IN SELECTED UNITS

Transmission Rate: 754.5641  $\text{qm} / [\text{m}^2 \cdot \text{day}]$

Permeation: 754.5641  $\text{gm} \cdot \text{mil} / [\text{m}^2 \cdot \text{day}]$

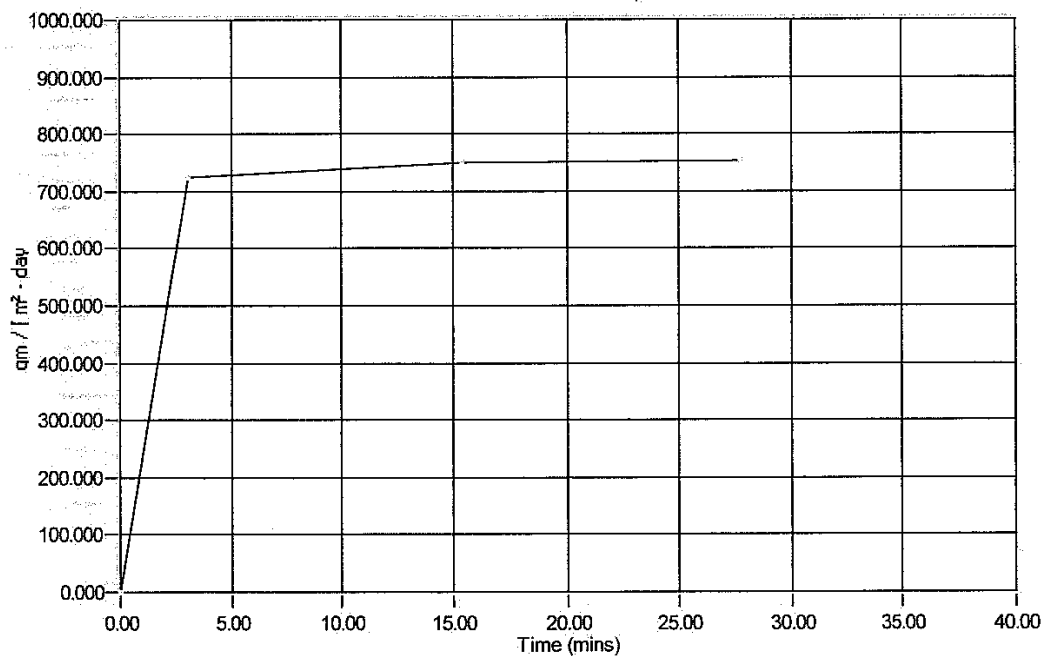
## NOTES

1/14/2021 3:45:14 PM: Flow in Cell A differs from Cal C flow by more than 3 SCCM. This is an indication of excessive edge leakage. ☐ ☐ The result:

## DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:03	725.2461	0:15	748.6489	0:27	754.5641
0:27	Complete						

Transmission Rate Data Graph



## MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab

Material Id: 00048-21 001 002 Test Number: ASTM D6701 002653

Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

## MODULE INFORMATION:

Module 1, Serial: MK 01087  
 Setup Name: 4STM 3806  
 Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
 Barometric Pressure: Auto: 727.86 mmHg

Flow Rate: Auto: 95.69 SCCM  
 Cal C Flow Rate: 99.12 SCCM  
 Ambient Temp: Manual: 23.0 °C.

## CELL D INFORMATION:

Sample Type: Film: 10 cm<sup>2</sup>, 1 mil  
 Test Mode: Convergence By Cycles  
 Control Params: Min 2 Cycles  
 ExamMinutes: 3  
 Cal C Mode: Use Last: 11417.35  
 Conditioning: Disabled  
 Cycles Complete: 3  
 Current Status: Test Done  
 Started Testing: 1/14/2021 3:44:18 PM  
 Elapsed Time: 0:30

## TEST RESULTS

## IN SELECTED UNITS

Transmission Rate: 700.1513 qm / [ m<sup>2</sup> - day ]Permeation: 700.1513 gm - mil / [ m<sup>2</sup> - day ]

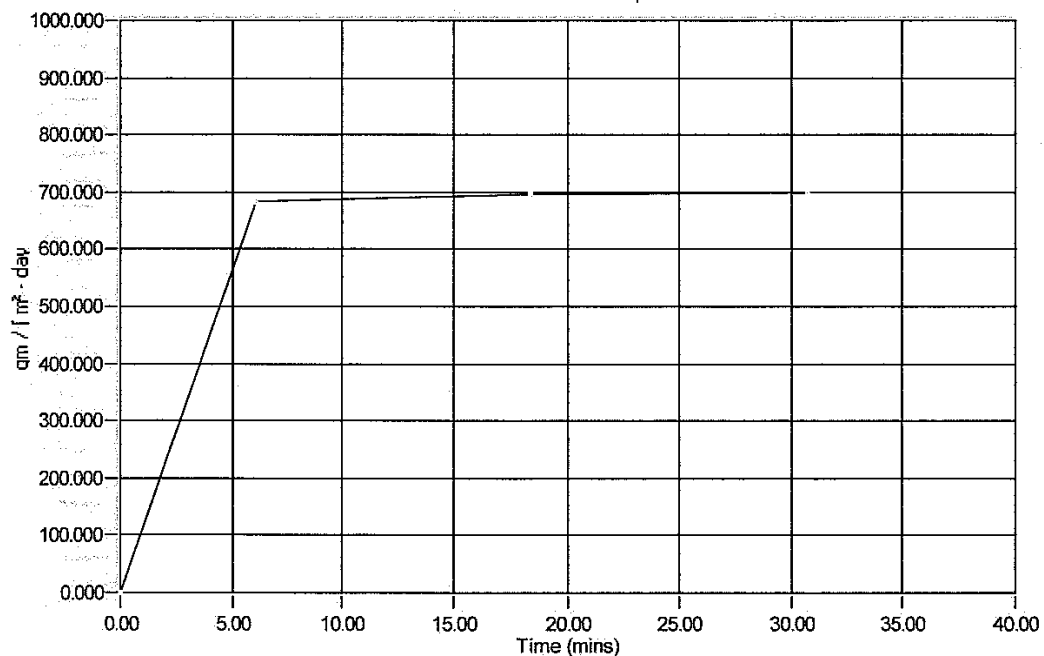
## NOTES

1/14/2021 3:48:18 PM: Flow in Cell D differs from Cal C flow by more than 3 SCCM. This is an indication of excessive edge leakage. □□ The result

## DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:06	684.1597	0:18	697.5703	0:30	700.1513
0:30	Complete						

Transmission Rate Data Graph



## MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab

Material Id: 00048-21 001 003 Test Number: ASTM D6701 002654

Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

## MODULE INFORMATION:

Module 1, Serial MK 01087  
 Setup Name: 4STM 3806  
 Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
 Barometric Pressure: Auto: 727.78 mmHg

Flow Rate: Auto: 103.74 SCCM  
 Cal C Flow Rate: 107.54 SCCM  
 Ambient Temp: Manual: 23.0 °C.

## CELL E INFORMATION:

Sample Type: Film: 10 cm<sup>2</sup>, 1 mil  
 Test Mode: Convergence By Cycles  
 Control Params: Min 2 Cycles  
 ExamMinutes: 3  
 Cal C Mode: Use Last: 12387.20  
 Conditioning: Disabled  
 Cycles Complete: 3  
 Current Status: Test Done  
 Started Testing: 1/14/2021 3:44:24 PM  
 Elapsed Time: 0:33

## TEST RESULTS

## IN SELECTED UNITS

Transmission Rate: 707.9862 qm / [ m<sup>2</sup> - day ]Permeation: 707.9862 gm - mil / [ m<sup>2</sup> - day ]

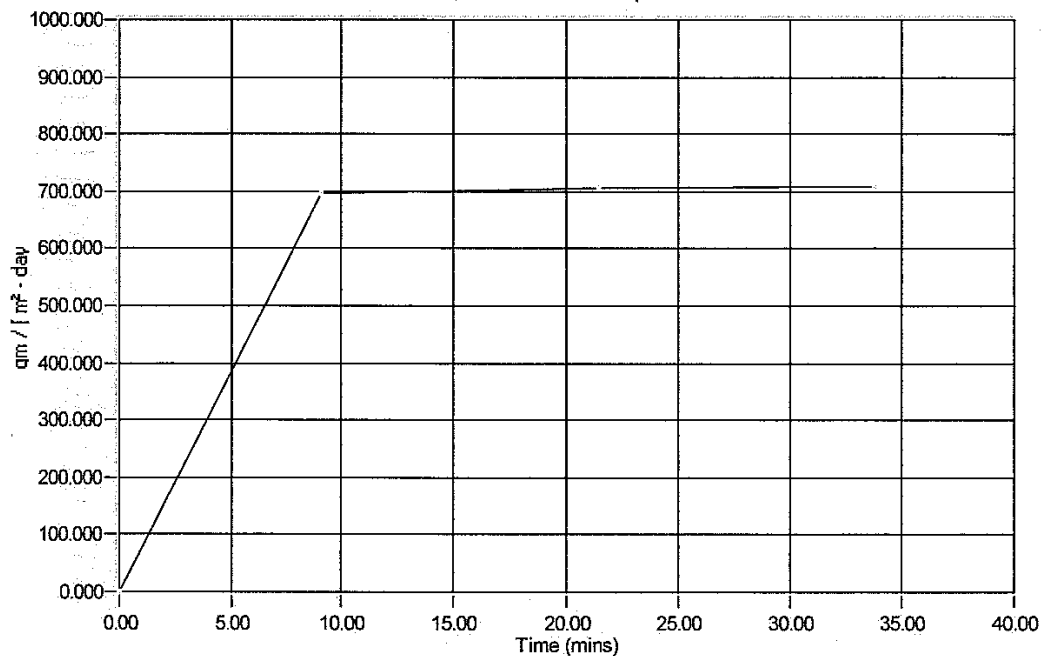
## NOTES

1/14/2021 3:51:24 PM: Flow in Cell E differs from Cal C flow by more then 3 SCCM. This is an indication of excessive edge leakage. □ □ The result

## DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:09	696.3431	0:21	705.0460	0:33	707.9862
0:33	Complete						

Transmission Rate Data Graph





PROTECTIVE GOWN 9040

MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab

Material Id: 00048-21 001 004 Test Number: ASTMD6701 002655

Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

MODULE INFORMATION:

Module 1, Serial: MK 01087  
Setup Name: 4STM 3806  
Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
Barometric Pressure: Auto: 728.09 mmHg  
  
Flow Rate: Auto: 101.51 SCCM  
Cal C Flow Rate: 105.85 SCCM  
Ambient Temp: Manual: 23.0 °C.

CELL F INFORMATION:

Sample Type: Film: 10 cm², 1 mil  
Test Mode: Convergence By Cycles  
Control Params: Min 2 Cycles  
ExamMinutes: 3  
Cal-C Mode: Use Last: 12171.74  
Conditioning: Disabled  
Cycles Complete: 2  
Current Status: Test Done  
Started Testing: 1/14/2021 3:44:28 PM  
Elapsed Time: 0:24

TEST RESULTS

IN SELECTED UNITS

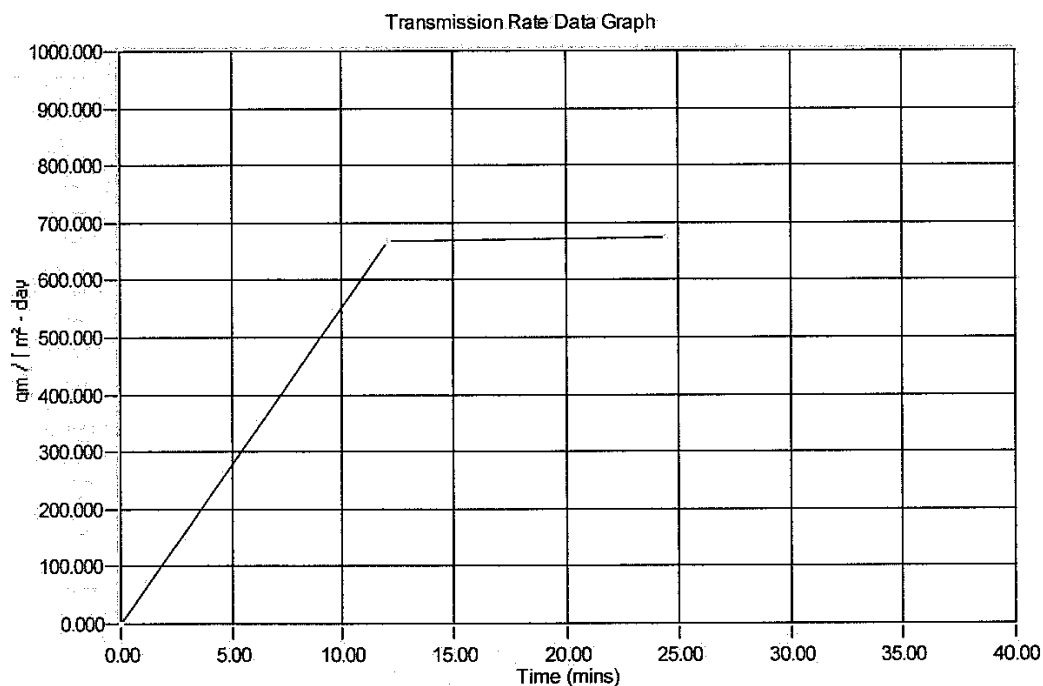
Transmission Rate: 673.8310 gm / [ m² - day ]  
Permeation: 673.8310 gm - mil / [ m² - day ]

NOTES

1/14/2021 3:54:29 PM: Flow in Cell F differs from Cal C flow by more then 3 SCCM. This is an indication of excessive edge leakage. □ □ The result:

DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:12	668.8938	0:24	673.8310	0:24	Complete



## MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab

Material Id: 00048-21-001-005 Test Number: ASTM D6701.002656

Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

## MODULE INFORMATION:

Module 1, Serial: MK\_01087  
 Setup Name: STM 3806  
 Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
 Barometric Pressure: Auto: 742.11 mmHg

Flow Rate: Auto: 99.91 SCCM  
 Cal C Flow Rate: 102.50 SCCM  
 Ambient Temp: Manual: 23.0 °C.

## CELL A INFORMATION:

Sample Type: Film: 10 cm<sup>2</sup>, 1 mil  
 Test Mode: Convergence By Cycles  
 Control Params: Min 2 Cycles  
 ExamMinutes: 3  
 Cal C Mode: Use Last: 11795.17  
 Conditioning: Disabled  
 Cycles Complete: 5  
 Current Status: Test Done  
 Started Testing: 1/19/2021 7:21:55 AM  
 Elapsed Time: 0:27

## TEST RESULTS

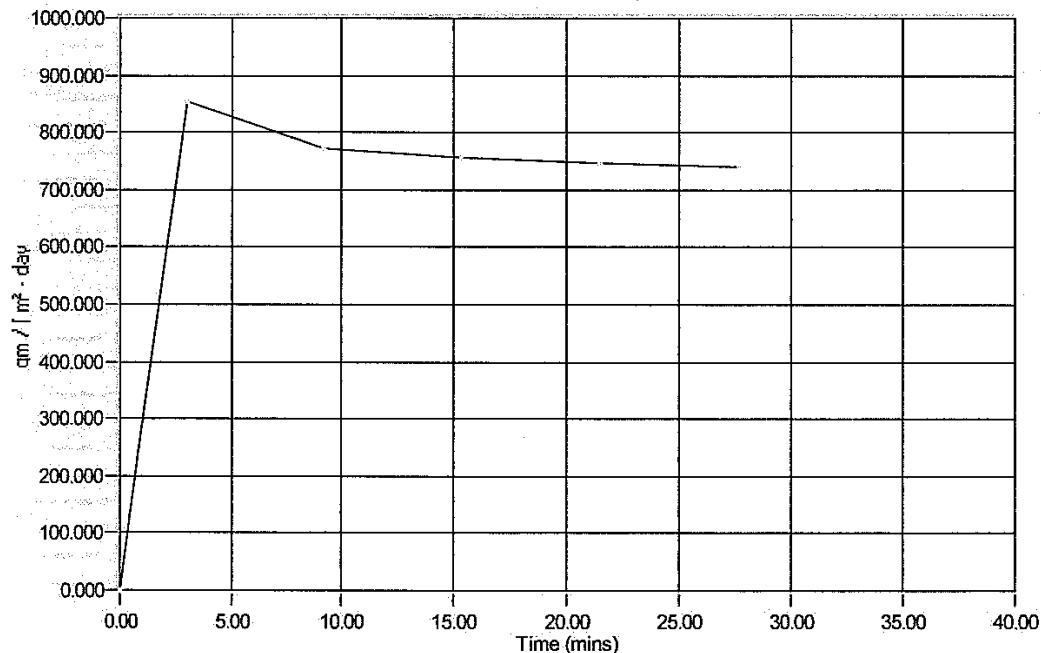
## IN SELECTED UNITS

Transmission Rate: 741.0622 gm / [ m<sup>2</sup> - day ]Permeation: 741.0622 gm - mil / [ m<sup>2</sup> - day ]

## DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:03	853.4416	0:09	772.0312	0:15	756.4753
0:21	746.0051	0:27	741.0622	0:27	Complete		

Transmission Rate Data Graph



PROTECTIVE GOWN 9040

MOCON PERMATRAN-W® 101K - Single Test Report

IPS Testing - Appleton, WI - Lab  
Material Id: 00048-21-001-006 Test Number: ASTM D6701 002657  
Using Method: ASTM D6701, Calibrated: 11/14/2020 7:34:59 AM

MODULE INFORMATION:

Module 1. Serial: MK 01087  
Setup Name: STM 3806  
Temp Setpoint/Actual: Auto: 37.8 / 37.8 °C.  
Barometric Pressure: Auto: 742.58 mmHg  
  
Flow Rate: Auto: 96.79 SCCM  
Cal C Flow Rate: 99.12 SCCM  
Ambient Temp: Manual: 23.0 °C.

CELL D INFORMATION:

Sample Type: Film: 10 cm², 1 mil  
Test Mode: Convergence By Cycles  
Control Params: Min 2 Cycles  
Exam Minutes: 3  
Cal C Mode: Use Last: 11417.35  
Conditioning: Disabled  
Cycles Complete: 5  
Current Status: Test Done  
Started Testing: 1/19/2021 7:22:05 AM  
Elapsed Time: 0:30

TEST RESULTS

IN SELECTED UNITS

Transmission Rate: 766.7586  $\text{cm}^3 / \text{m}^2 \cdot \text{day}$   
Permeation: 766.7586  $\text{gm} \cdot \text{mil} / [\text{m}^2 \cdot \text{day}]$

DATA POINTS

Time	Rate/Event	Time	Rate/Event	Time	Rate/Event	Time	Rate/Event
0:00	Test	0:05	824.3372	0:12	793.9752	0:18	780.7400
0:24	772.1942	0:30	766.7586	0:30	Complete		

Transmission Rate Data Graph

