

Transmission Rate

MATERIALS AND METHODS

Following are test conditions and instrumentation used to measure permeability of each gas.

Oxygen (O₂) gas*

1. Test conditions

Test Gas	Oxygen	Test Temperature	71.6 F
Test Gas Concentration	100%	Carrier Gas	98% N ₂ , 2% H ₂
Test Gas Humidity	60 % RH	Carrier Gas Humidity	0 % RH

2. Instrument: Oxygen (O₂) Samples were analyzed on a Mocon Ox-Tran 2/21 which conforms to ASTM D-3985 and F-1927. The lowest detectable value of this instrument is 0.000322 cc/100 in²-24hr-atm.

Carbon dioxide (CO₂) gas*

Test Gas	CO ₂	Test Temperature	71.6 F
Test Gas Concentration	100%	Carrier Gas	100% N ₂ ,
Test Gas Humidity	60 % RH	Carrier Gas Humidity	0 % RH

2. Instrument: Above samples were analyzed on a MOCON Permatran C 4/41 conforms to ASTM F-2476. The lowest detectable value of this instrument is 0.0644 cc/100 in²-24hr-atm.

Nitrogen (N₂) gas*

1. Test conditions

Test Gas	Nitrogen	Test Temperature	71.6 F
Test Gas Concentration	N/A	Carrier Gas	100% He
Test Gas Humidity	0 % RH	Carrier Gas Humidity	0 % RH

2. Instruments

Above samples were analyzed on a MOCON Multi-Tran 400. The lowest detectable value of this instrument is 0.0644 cc/100 in²-24hr-atm

Water Vapor Transmission Rate (WVTR)*

1. Test Conditions

Test Gas	Water Vapor	Test Temperature	71.6 F
Test Gas Concentration	N/A	Carrier Gas	100% N ₂
Test Gas Humidity	60 % RH	Carrier Gas Humidity	0 % RH

2. Instruments

Above samples were analyzed on a MOCON Permatran W 3/33 (ASTM F-1249). The lowest detectable value of this instrument is 0.000322 cc/100 in²-24hr-atm

**Test results based on material before thermoforming. We recommend customers test each application to ensure optimal performance.*

Test Results

Sample Identification	Oxygen Transmission Rate* cc/100 in ² -24hr-atm		
	Rep.1	Rep.2	Mean
DPET**	0.538	0.537	0.538

Sample Identification	CO2 Transmission Rate* cc/100 in ² -24hr-atm		
	Rep.1	Rep.2	Mean
DPET**	2.96	2.90	2.93

Sample Identification	Nitrogen Transmission Rate* cc/100 in ² -24hr-atm		
	Rep.1	Rep.2	Mean
DPET**	0.258	10 0.193	0.225

Sample Identification	Water Vapor Transmission Rate* cc/100 in ² -24hr-atm		
	Rep.1	Rep.2	Mean
DPET**	0.0607	0.0633	0.0620

**The results are for DPET™, however same applies to rDPET™ as both materials have the same chemical make-up.

*Test results based on material before thermoforming. We recommend customers test each application to ensure optimal performance.