Flexible Packaging Barrier Test Report

Summary of four transmission tests on finished laminated films

This document summarises four transmission tests carried out by DSS Pack on two finished laminated films. Both films share an identical 40 µm cast polypropylene (CPP) inner layer and differ only in the surface film, so any difference in performance comes from that surface film. Both structures were measured under identical conditions. The figures below are the transmission values reported by the instrument; only the OTR and WVTR transmission results are reproduced here.

Test conditions

Test	Standard	Temperature	Relative humidity	Sample area	Test date
OTR	ASTM D3985	23.0 °C	0% RH	50.00 cm²	2026-09-16
WVTR	ASTM F1249	38.0 °C	90% RH	50.00 cm²	2026-09-16

Results

Structure	Test	Instrument	Test ID	Transmission result
AlOx 14 µm / CPP 40 µm	OTR	MOCON OX-TRAN® 2/22 (H)	1981	1.1401 cc/m²·day
AlOx 14 µm / CPP 40 µm	WVTR	MOCON AQUATRAN® 3/38 (H	1971	0.5973 g/m²·day
K-PET 14 µm / CPP 40 µm	OTR	MOCON OX-TRAN® 2/22 (H)	1980	9.0022 cc/m²·day
K-PET 14 µm / CPP 40 µm	WVTR	MOCON AQUATRAN® 3/38 (H	1970	3.6512 g/m²·day

Method

Oxygen transmission rate (OTR) was measured in accordance with ASTM D3985 on a MOCON OX-TRAN® 2/22 (H). Water vapour transmission rate (WVTR) was measured in accordance with ASTM F1249 on a MOCON AQUATRAN® 3/38 (H). All tests used a 50.00 cm² sample area and were performed on 2026-09-16. OTR was measured at 23.0 °C and 0% relative humidity; WVTR was measured at 38.0 °C and 90% relative humidity. The values reported are transmission rates (OTR and WVTR) only.

Scope of these results

These results apply to the finished laminated films as tested, under the conditions stated above. They are provided as a same-conditions comparison - one inner layer, two surface films - and do not constitute a specification for any other product or structure. Lab values are measured on flat, undamaged samples; a formed and filled pack may perform differently. Instrument serial numbers and internal sample identifiers have been omitted from this summary.

DSS Pack
Flexible packaging manufacturer, certified to ISO 9001, FDA and BRC. Full test reports are available on request - write to cn_dsspack@outlook.com.