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Test report

REPORTDATE	REPORTNAME	AUTHORING PERSON(S)
Friday the 4th of April 2025	R-24-268-2-2-AUJu	Riet Henno Dimitri Adons
APPLICANT Company AUCTUM sprl Address Rue des Piétresses 36 BE-4020 Jupille Contact Claude Husquinet 4020auctum@gmail.com	**SUBJECT** Research on the water vapour transmission rate (WVTR) and S_d-value of 1 material type (**AMISEAL FIX 11 coating**) using the 'wet cup' method at controlled temperature (23°C) and relative humidity (50%RH), based on ISO 12572 'Condition E', correlated to ASTM E-96.	**ORDER** Date: 20th of February 2025 Reference: Confirmed quotation O-24-268-1-AUJu
TESTMETHOD(S) USED - ASTM E-96 (*wet cup method*) ≈ ISO 12572 (condition E) based; provided customization (free test area is 0,003162 m^2 and the cup height is 16 mm instead of 20 mm).	**TESTDATE** from the 24th of February until the 24th of March 2025	**ANALIST(S)** Riet Henno
TEST EQUIPMENT USED - E-96 standardised cups (height 16 mm) - Balance: KERN ACS ACJ - Climate chamber: Memmert HPP		
SAMPLE METHOD USED 6 round samples with a diameter of ± 7,2 cm	**DATE SAMPLE PREPARATION** Before starting the tests, preparation performed by the applicant on Wednesday the 19th of February 2025	**LABORATORY ROOM** TC 1.30
REMARKS: The data and decisions apply only to the samples described in the report. Neither imo-imomec nor its staff or collaborators can be held responsible for consequences arising from data and/or decisions of this report.		

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SAMPLES

Receipt: the 19th of February 2025 (preparation by the applicant)
Type: 1 coating type (applied on substrate discussed with and defined by the applicant)
Identification: AMISEAL FIX 11 coating

TEST CONFIGURATION / TEST SAMPLES

Setup: 6 round samples with a diameter of ± 7,2 cm (including 1 blank)
(free test orientation)
Remark: Due to the fragile character of the substrate material, several samples were damaged during the test. Finally, the test date of 4 test samples could be used.

RESULTS & CONCLUSION

The given water vapour transmission rate (WVTR) of the coating layer was determined using the reciprocal additivity rule, assuming a series resistance model. Based on the measured total TR and the known TR of the other substrate layer, the TR of the coating layer was calculated as:

$$\frac{1}{TR_{\text{total}}} = \frac{1}{TR_{\text{known}}} + \frac{1}{TR_{\text{unknown}}}$$

This method enables the estimation of individual layer permeability in multilayer barrier systems.

Water vapour @ 23°C/100%RH/50%RH	test conditions	Transmission rate (Period) (g/[m².day])	Sd-value (m)
		Average	Average
AMISEAL FIX 11 coating (CALCULATED)	23°C, 100%/50% RH	2622	0,009

Important remark:
The given value is an average calculated value based on 4 samples.

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Applied and contract research in collaboration with industry

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