



Client:	SURFORMA, S.A.	Version:	1
Address:	Lugar do Espido - Via Norte Maia 4480-909	Final Report	

Sample:	Laminate	Sampled:	05/05/2021
Reference:	Antiviral laminates	Received:	05/05/2021
Conditioning:	-----	Starting:	13/05/2021
Sampling:	By the client	Ending:	25/05/2021
		Issue:	26/05/2021

Tests and Methods	Results	Uncertainty	Specification
Overall migration into aqueous food simulants by total immersion – ethanol 10% Based EN 1186-1:2002 excluding table 2, 3 and Annex A; EN 1186-3:2002; Reg. 10/2011 (Annex III and V) and amendments	5,3 mg/dm ²	± 2	≤ 10 mg/dm ²
Specimen 1	5,4		
Specimen 2	4,8		
Specimen 3	5,7		
Overall migration into aqueous food simulants by total immersion – acetic acid 3% Based EN 1186-1:2002 excluding table 2, 3 and Annex A; EN 1186-3:2002; Reg. 10/2011 (Annex III and V) and amendments	8,0 mg/dm ²	± 2	≤ 10 mg/dm ²
Specimen 1	8,5		
Specimen 2	9,5		
Specimen 3	6,0		
Overall migration into fatty food simulants by total immersion. Substitute tests – ethanol 95% Based EN 1186-1:2002 excluding table 2, 3 and Annex A; EN 1186-14:2002; Reg. 10/2011 (Annex III and V) and amendments	< 2,0 (LOQ) mg/dm ²	---	≤ 10 mg/dm ²
Specimen 1	< 2,0		
Specimen 2	< 2,0		
Specimen 3	< 2,0		

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Results apply to the sample as received. Uncertainty refers to the expanded uncertainty (k=2) for a 95% confidence interval. Uncertainties presented in % are of relative value and the remaining are in absolute value. The information about the identification of the client and the sample has been provided by the client and the laboratory is not responsible for it. The tests were performed in the permanent facilities of the Laboratory. Unless otherwise stated the results presented in this test report refer only to the sample tested. This document cannot be reproduced except in full, without prior written approval.



Tests and Methods	Results	Uncertainty	Specification
Migration of copper into acetic acid 3% PE.SE.PL.47. Ed.01 – AAS method; based EN 13130-1:2004; Reg. 10/2011 (Annex III and V) and amendments	0,71 mg/kg	---	≤ 5 mg/kg
Overall migration intermediate results (average) into:			
Ethanol 10%			
1 st migration	12,6 ± 30% (AT) mg/dm ² ; 2 nd migration	8,9 ± 2 (AT) mg/dm ²	
Acetic acid 3%			
1 st migration	12,9 ± 30% (AT) mg/dm ² ; 2 nd migration	9,2 ± 2 (AT) mg/dm ²	
Ethanol 95%			
1 st and 2 nd migration	< 2,0 (LOQ) mg/dm ²		
Specific migration intermediate results (average) into:			
Cu into acetic acid 3%			
1 st migration	0,28 mg/kg; 2 nd migration	0,53 mg/kg	
LOQ – Limit of quantification			
AT –Analytical tolerance			

Overall and specific migration testing conditions:

OM3 based on Regulation 10/2011 and amendments; JRC guidelines 2020 "Testing conditions for kitchenware articles in contact with foodstuffs: plastics and metals - Table 1 and table 2 Plastic", JRC121622.

Overall migration: 2 hours at 70 °C, repeated use, each specimen (1 dm²) was immersed into 100 mL of food simulants, ethanol 10%, acetic acid 3% and ethanol 95%. The presented results corresponds to the 3rd migration.

Specific migration: 2 hours at 70 °C, repeated use, each specimen (0.8 dm²) was immersed into 100 mL of food simulant acetic acid 3%. The presented results corresponds to the 3rd migration.

Specific migration results were corrected with the ratio area/volume 6 dm²/ kg of food (in accordance to article 17.2 (b) from Reg.10/2011).

Specifications are set by Regulation 10/2011 and amendments.

References:

- N. Jakubowska; G Beldi; P. Robouch; E. Hoekstra; Testing conditions for kitchenware articles in contact with foodstuffs: plastics and metals - Table 1 and table 2 Plastic", JRC121622 - 2020.
- Amendments to the Regulation 10/2011: Regulations nº 321/2011, 1282/2011, 1183/2012, 202/2014, 865/2014, 2015/174, 2016/1416, 2017/752, 2018/79, 2018/213, 2018/831, 2019/37, 2019/988, 2019/1338 and 2020/1245.

Results apply to the sample as received. Uncertainty refers to the expanded uncertainty (k=2) for a 95% confidence interval. Uncertainties presented in % are of relative value and the remaining are in absolute value. The information about the identification of the client and the sample has been provided by the client and the laboratory is not responsible for it. The tests were performed in the permanent facilities of the Laboratory. Unless otherwise stated the results presented in this test report refer only to the sample tested. This document cannot be reproduced except in full, without prior written approval.