

REPORT OF ANALYSIS No. 96490/21/TCH

Client MADI SP. Z O.O. STARA DĘBOWA WOLA 25C 27-400 OSTROWIEC ŚWIĘTOKRZYSKI	Sample description (according to declaration of Client) Polypropylene (PP) fabric used for the production of flexible BIG BAG containers
Sample received: 2021-02-22	Sample without any visible damages
Analysis completed (the date of performance of the laboratory activity): 2021-05-05	
Report dated: 2021-05-05	
	Order of 2021-02-19 The samples were delivered by Client

Test	Method	Food simulant	Test conditions	Unit	Result	Criteria	Parameter compliant / non-compliant
* Sensory analysis - scoring method ¹⁾	DIN 10955:2004						
Odour		almond flakes	10 days at 23°C		0,0	-	-
Flavour		almond flakes	10 days at 23°C		0,0	-	-
* Chromium (VI) ²⁾³⁾	PB-269 ed I of 02.06.2014	-	-	mg/kg	< 5,0	-	-
* Overall migration - food simulant E ⁴⁾⁵⁾	PN-EN 1186-13:2007 (met. B)	tenax	10 days at 40°C	mg/dm ²	1,2 (1,3; 1,1; 1,2) ± 1,1	≤ 10	compliant
* Specific migration - 1,1,1-trimethylolpropane [nr CAS: 77-99-6; nr ref. 13380, 25600, 94960] ³⁾⁴⁾⁶⁾	CEN/TS 13130-28:2005	10% ethanol	10 days at 60°C	mg/kg	< 0,6	≤ 6	compliant
* Specific migration - 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione [CAS: 27676-62-6; Ref: 95360] ³⁾⁴⁾⁶⁾	PB-300 ed. I of 10.08.2019	10% ethanol	10 days at 60°C	mg/kg	< 0,5	≤ 5	compliant
Preparation of the simulant to specific migration test - food simulant A ⁷⁾	PN-EN 13130-1:2006						
Food contact surface area/food simulant volume		10% ethanol	10 days at 60°C	dm ² /ml	0,60/100	-	-
* Content of elements (heavy metals acc to Directive 94/62/EC) ²⁾³⁾	PB-233/ICP ed. II of 15.11.2017						
Cadmium (Cd)		-	-	mg/kg	< 0,5	-	-

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 Weronika Stawicka, Senior Specialist analyst

Approved by: Hanna Wachowska, Laboratory Director (*Approved with electronic signature*)

Laboratory: Gdynia 81-571, Chwaszczyńska 180

The results relate to the analysed samples only. Unless otherwise specified given expanded measurement uncertainty was estimated for the coverage factor k=2 at 95% confidence level. Sampling uncertainty has not been taken into consideration. Unless otherwise specified when conformity is stated J.S. Hamilton Poland Sp. z o.o. applies the simple acceptance decision rule in accordance with ILAC-G8:09/2019. This Report cannot be reproduced partially without a prior written consent of J.S. Hamilton Poland Sp. z o.o. Responsibility of J.S. Hamilton Poland Sp. z o.o. is restricted exclusively to the results and statements presented in original copy of the Report. The service confirmed by this Report is subject to the General Terms and Conditions of Services of J.S. Hamilton Poland Sp. z o.o. published on www.hamilton.com.pl

* Test method accredited; # Test performed by external provider

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Lead (Pb)	-	-		mg/kg	< 2,0	-	-
Mercury (Hg)	-	-		mg/kg	< 0,5	-	-
Total content lead, cadmium, mercury and chromium (VI)	-	-		mg/kg	< 100	≤ 100	compliant
* Enumeration of mesophilic aerobic bacteria	PN-EN ISO 4833-1:2013-12			cfu/cm ²	<1	-	-
* Enumeration of yeast and moulds	PN-ISO 7954:1999			cfu/cm ²	<1	-	-
# * 2-methyl-1,3-butadiene [CAS No: 78-79-5; ref. No: 19243/21640] ⁴⁾⁶⁾⁸⁾	GC-MS	-	-	mg/kg	not detected	≤0,01	compliant
# Methacrylic acid, diester with 1,4- butanediol (CAS 2082-81-7, Ref. No. 20410) ⁴⁾⁶⁾⁹⁾	LC-QTOF-MS	10% ethanol	10 days at 60°C	mg/kg	not detected	≤ 0,05	compliant
# * Specific migration - n-octylphosphonic acid [CAS: 4724-48-5; Ref.: 68860] ⁴⁾⁶⁾¹⁰⁾	A 12-104	10% ethanol	10 days at 60°C	mg/kg	< 0,01	≤ 0,05	compliant
# Specific migration - 3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid, monoethyl ester, calcium salt (Irganox 1425); [CAS: 65140-91-2; Ref: 46880] ⁴⁾⁶⁾¹⁰⁾	A-96-35 method R	10% ethanol	10 days at 60°C	mg/kg	< 1	≤ 6	compliant

1) The scale used for the odour/flavour assessment:

0 - no noticeable deviation of the odour /flavour,

1 - barely noticeable deviation of the odour /flavour (hard to define yet),

2 - weak deviation of the odour /flavour,

3 - significant deviation of the odour /flavour,

4 - strong deviation of the odour /flavour (this intensity does not determine the probable maximum).

2) Directive 94/62/ EC of 20 December 1994 on packaging and packaging waste to the content Pb, Cd, Hg and Cr(VI).

3) "<" indicates below the limit of quantification of the method.

4) Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food which is a specific measure within the meaning of Article 5(1) of Regulation (EC) No 1935/2004 of the European Parliament and of the

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REPORT OF ANALYSIS No. 96490/21/TCH

Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC (OJ L12 of 15.1.2011, as amended).

- ⁵⁾ Weight of food simulant/Food contact surface area: 4 g/1 dm².
- ⁶⁾ Migration results expressed in mg/kg applying the conventional S/V ratio of 6 dm² per kg of food.
- ⁷⁾ PN-EN 13130-1:2006 p.15
- ⁸⁾ LOQ=0,00015mg/kg
LOD=0,000073mg/kg
- ⁹⁾ LOD: 0,0038 [mg/kg]; LOQ: 0,0075 [mg/kg]
- ¹⁰⁾ Symbol „<” means less than limit of detection of the analytical method.

Tests: 2-Methyl-1,3-butadiene [CAS No: 78-79-5; ref. No: 19243/21640] were performed by external provider with an accreditation number STS 038

Test: Specific migration - acrylates was performed by external provider SQTS - Swiss Quality Testing Services, Dietikon 1, Szwajcaria

Tests: Specific migration - n-octylphosphonic acid CAS: 4724-48-5; Ref.: 68860 were performed by external provider with an accreditation number L 1004

Test: Specific migration - 3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid, monoethyl ester, calcium salt [CAS no: 65140-91-2; Ref.no.: 46880] was performed by external provider Institut pro testování a certifikaci, a.s., Zlín – Louky, Czechy

THE END OF THE REPORT

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