



Test Certificate 9912208807

Issued under Section 12 of the Standards Law, 1953

Details of order:

Table with order details: Order name: Polyraz industries, Address: Maoz Haim 10845, ISRAEL, Date order: 14-Aug-19

Sample Description As Declared:

Table with sample description: Products: MLPPDF/PE, Sampled by: Customer, Sample received in lab: 14-Aug-19, Testing time: From: 15-Aug-19 to 08-Sep-19, Test requested: Selected test(s) as requested by client, Test method: Please refer to next page(s), Test results: Please refer to next page(s)

This document contains 3 pages and may be used only in full.

The test results in this document refer only to the item tested.

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Conclusion:

Table with conclusion details: For compliance with EU Regulation 10/2011 as amended and Israel Standard SII 5113. 1. Overall migration of extractives... Comply, 2. Specific migration of heavy metals... Comply, 3. Specific migration of primary aromatic amines (PAA)... Comply, 4. U.S. Food and Drug Administration 21 CFR 175.300- "Resinous and polymeric coatings" Comply, 5. Determination of Total Lead (Pb), Cadmium (Cd), Mercury (Hg) and Hexavalent Chromium (Cr (VI)) according to European directive 94/62/EC. Comply

Certified by:

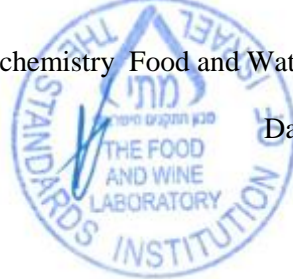
Gadi Efrati

Head of Food Contact Material Section

Naor Cohen

Acting Head of chemistry Food and Water Branch

Date: 16/09/2019



Certificate Number: AT-2045

## Test Certificate No.9912208807

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**Description:** MLPPDF/PE Sheet and thermoforming products from it, PE is food contact layer. Aqueous and alcoholic foodstuffs, acidic, oily, milk products and dry food products for hot fill conditions at a temperature between 70°C for 2 hours, or heating up to 100°C for up to 15 minutes and also for prolonged storage at 40°C and below (refrigerated and deep-frozen storage).

### 1- Overall Migration Protocol

Selection of test conditions as specified to Regulation 10/2011 Annex III, V;

Selection of test method: EN 1186-1

Tested sample	Food Simulants	Test conditions	Extractives, mg/sq. dm	Limit, mg/sq. dm
MLPPDF/PE	A (Ethanol 10%)	10 days at 40°C	<1	10
MLPPDF/PE	B (Acetic acid 3%)	10 days at 40°C	3.2	10
MLPPDF/PE	D2 (Olive oil)	10 days at 40°C	<1	10

### 2-Specific migration of metals according to Regulation (EU) 10/2011

Selection of test method: EN 13130-1 and sample preparation in 3 w/w % acetic acid at 40°C for 10 days

Method: ICP-AES (inductively argon coupled plasma emission spectroscopy)

Soluble metal	SML, ppm	MDL, ppm	Results, ppm
Barium	1	0.1	ND
Cobalt	0.05	0.05	ND
Copper	5	0.1	ND
Iron	48	1	ND
Lithium	0.6	0.1	ND
Manganese	0.6	0.1	ND
Zinc	25	0.5	ND
Aluminum	1	0.1	ND
Nickel	0.02	0.01	ND

Note:

ppm=mg/kg (1,000 ppm=1,000 mg/kg=0.1%); SML = Specific Migration Limit;x

ND= Not Detected (&lt;MDL); MDL=Method Detection Limit;

### 3- Specific migration of Primary aromatic amines (PAA)- according to Regulation (EU) 10/2011

As specified in Regulation (EU) No. 10/2011 ANNEX III and V. Method: In-house method

Tested sample	Food Simulants	Test conditions	Extractives, mg/kg	Limit, mg/kg
MLPPDF/PE	Acetic acid 3%	10 days at 40°C	ND	0.01

### 4- Total Extractives –21 FDA 175.300

As specified in U.S Food and Drug Administration 21 FDA 175.300 table 2 condition of use: C

Tested sample	Simulants	Test conditions	Extractives, mg/in <sup>2</sup>	Limit, mg/in <sup>2</sup>
MLPPDF/PE	Distilled water	Fill boiling cool to 100 deg. F	<0.1	0.5
MLPPDF/PE	Heptane	15 minutes at 120 deg. F	0.1	0.5
MLPPDF/PE	Ethanol 8%	2 hours at 150 deg. F	<0.1	0.5

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**5. Lead, cadmium, mercury, hexavalent chromium Content in MLPPDF/PE Sheet**

*Test Method :Laboratory Standard Operating Procedures in the determination of:*

*Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr (VI)) By direct X-ray Fluorescence Spectrometry (XRF) Screening.*

<i>Element tested</i>	<i>Limit, ppm</i>	<i>Results, ppm</i>
<i>Lead (Pb)</i>	-	<2
<i>Cadmium (Cd),</i>	-	<12
<i>Mercury (Hg)</i>	-	<2
<i>Hexavalent Chromium (Cr (VI))</i>	-	1
<i>Sum of (Pb), (Cd), (Hg), (Cr (VI))</i>	100	<17

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