Test Certificate 9912208812/2

Issued under Section 12 of the Standards Law, 1953

Details of order:

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

Sample Description As Declared:

Products:	MLPS
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.

This document does not constitute a license to mark the product with the standards mark

Conclusion:

For compliance with EU Regulation 10/2011 as amended and Israel Standard SII 5113	
1. Overall migration of extractives from packaging using solvents simulating types of foodstuffs	Comply
2. Specific migration of heavy metals according to Regulation (EU) 10/2011	Comply
3. Specific migration of primary aromatic amines (PAA) according to Regulation (EU) 10/2011	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: 24/09/2019

THE STANDARDS INSTITUTION OF ISRAEL THE FOOD AND WINE LABORATORY

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Certificate Number: AT-2045

ilac-MRA

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Description: MLPS Sheet and thermoforming products from it, PE is food contact layer.
Aqueous and alcoholic foodstuffs, acidic, oily, milk products and dry food products for high temperature applications up to 85^{o}C and refrigerated 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
MLPS	*A (Ethanol 10%)*	*1 hour at 100^{o}C*	*<1*	*10*
MLPS	*B (Acetic acid 3%)*	*1 hour at 100^{o}C*	*<1*	*10*
MLPS	*D2 (Olive oil)*	*1 hour at 100^{o}C*	*6.6*	*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 100°C for 1 hour
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 (<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
MLPS	*Acetic acid 3%*	*1 hour at 100^{o}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: H

Tested sample	Simulants	Test conditions	Extractives, mg/in^2	Limit, mg/in^2
MLPS	*Distilled water*	*30 minutes at 212 deg. F*	*<0.1*	*0.5*
MLPS	*Heptane*	*30 minutes at 120 deg. F*	*<0.1*	*0.5*
MLPS	*Ethanol 8%*	*2 hours at 150 deg. F*	*<0.1*	*0.5*

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5. Lead, cadmium,mercury, hexavalent chromium Content in MLPS 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.

Element tested	***Limit, ppm***	***Results, ppm***
Lead (Pb)	-	*<5*
Cadmium (Cd),	-	*<5*
Mercury (Hg)	-	*<5*
Hexavalent Chromium (Cr (VI))	-	*<5*
Sum of (Pb), (Cd), (Hg), (Cr (VI))	*100*	*<20*

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