ISRAEL PLASTICS & RUBBER CENTER(IPRC)

ISRAC
Israel Laboratory Accreditation Authority
ISO/IEC 17025
No 012 .מס

Haifa Branch: Technion City, Haifa 3200003, Israel, Tel: 972-4-8225174, Fax: 972-4-8320157
Ramat-Gan Branch: Shenkar College - 12, Anna Frank St., Ramat Gan 5252626, Israel, Tel: 972-3-6130111, Fax: 972-3-6130019
E-mail address: iprc@isplrc.co.il Website: www.isplrc.co.il

Food Contact Plastic

Test Report

Conformity with: Framework Regulation (EC) No. 1935/2004, Regulation (EU) No. 10/2011 and its amendments, Israeli Standard 5113 and title 21 Code of Federal Regulations section 175.300 table 2 condition E and condition A (for MLPP).

ISPLRC Job No.	R2035-1
Client:	**Polyraz Plastic Industries Ltd**
Client's Address:	Kibbutz Maoz Haim, 10845 Israel.
Item tested:	1) PP mono film and thermoforming products of it, PP is food contact layer 2) PP/PE – multilayer film and thermoforming products of it, PE is food contact layer 3) MLPP – multilayer film and thermoforming products of it, PP is food contact layer 4) MLPP/PE – multilayer film and thermoforming products of it, PE is food contact layer 5) MLFPP – multilayer film and thermoforming products of it, PP is food contact layer 6) MLFPP/PE – multilayer film and thermoforming products of it, PE is food contact layer
Item designation:	Storage of fatty, acidic and aqueous foodstuff.
Use:	Room temperature filled and stored.
Arrival in Lab:	28-Dec-2015
Testing Period:	Until 03-April-2016

Summary of test results:

Test Conducted	Result
Overall Migration Test – PP mono film	PASS
Overall Migration Test – PP/PE multilayer film	PASS
Overall Migration Test – MLPP multilayer film	PASS
Overall Migration Test – MLPP/PE multilayer film	PASS
Overall Migration Test – MLFPP multilayer film	PASS
Overall Migration Test – MLFPP/PE multilayer film	PASS
FDA Compliance - PP mono film	PASS
FDA Compliance - PP/PE multilayer film	PASS
FDA Compliance - MLPP multilayer film	PASS
FDA Compliance - MLPP/PE multilayer film	PASS
FDA Compliance - MLFPP multilayer film	PASS
FDA Compliance - MLFPP/PE multilayer film	PASS

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Overall Migration test:

Test Requested:

To determine compliance with Framework Regulation (EC) No. 1935/2004, Regulation (EU) No. 10/2011 and its amendments for plastics materials and articles intended to come into contact with food.

To determine compliance with title 21 Code of Federal Regulations section 175.300 table 2 condition E and condition A (for MLPP) and less severe conditions, for all type of foods as described in section 175.300 table 1.

1) Applied Test Method & Conditions EU regulations:

Test Method	Principle
EN 1186 - 2	Test methods for overall migration into olive oil by total immersion.
EN 1186 - 4	Test methods for overall migration into olive oil by cell.
EN 1186 - 5	Test methods for overall migration into aqueous food simulants by cell.

Test Number	Contact time in days [d] or hours [h] at Contact temperature in [°C]	Intended food contact conditions
OM2	10 d at 40 °C	Any long term storage at room temperature or below, including heating up to 70 °C for up to 2 hours, or heating up to 100 °C for up to 15 minutes
OM5	2 h at 100 °C or at reflux or alternatively 1 h at 121 °C	High temperature applications up to 121 °C.

2) Applied Test Method & Conditions FDA regulations:

As outlined in 21 CFR 175.300, see section 3 of this report.

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3) Test Results

Item	Simulant	Test method	Test conditions	Overall migration Results (mg/dm^2)	Max. Permissible Limit (mg/dm^2)
PP mono film	B	EN 1186-5	10 d at 40 °C	1.30	10
	D1	EN 1186-5	10 d at 40 °C	2.63	10
	D2	EN 1186-2	10 d at 40 °C	1.60	10
PP/PE multilayer film	B	EN 1186-5	10 d at 40 °C	0.96	10
	D1	EN 1186-5	10 d at 40 °C	0.93	10
	D2	EN 1186-4	10 d at 40 °C	1.60	10
MLPP multilayer film	B	EN 1186-5	2 h at 100 °C	1.10	10
	D1	EN 1186-5	2 h at 100 °C	0.66	10
	D2	EN 1186-4	2 h at 100 °C	9.70	10
MLPP/PE multilayer film	B	EN 1186-5	10 d at 40 °C	2.24	10
	D1	EN 1186-5	10 d at 40 °C	3.50	10
	D2	EN 1186-4	10 d at 40 °C	1.20	10
MLFPP multilayer film	B	EN 1186-5	10 d at 40 °C	1.92	10
	D1	EN 1186-5	10 d at 40 °C	2.16	10
	D2	EN 1186-4	10 d at 40 °C	2.70	10
MLFPP/PE multilayer film	B	EN 1186-5	10 d at 40 °C	3.92	10
	D1	EN 1186-5	10 d at 40 °C	3.91	10
	D2	EN 1186-4	10 d at 40 °C	1.60	10

Note: Simulant B: Acetic Acid 3% (w/v)
Simulant D1: Ethanol 50% (v/v)
Simulant D2: Oil
mg/kg: milligram per kilogram of foodstuff
mg/dm^2: milligram per square decimeter
°C: degree Celsius
<: less than

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Item	Extractant	Test Method Reference to:	Test conditions	OML Res. (mg/in^2)	Max. Per. (mg/in^2)
PP film	Water	21 CFR 175.300	Fill boiling cool to 100 °F	< 0.10	0.5
	Heptane	21 CFR 175.300	120 °F 15 min.	0.22	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	0.13	0.5
PP/PE multilayer film	Water	21 CFR 175.300	Fill boiling cool to 100 °F	< 0.10	0.5
	Heptane	21 CFR 175.300	120 °F 15 min.	0.18	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	< 0.10	0.5
MLPP multilayer film	Water	21 CFR 175.300	250 °F 2 hr.	0.17	0.5
	Heptane	21 CFR 175.300	150 °F 2 hr.	< 0.10	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	0.28	0.5
MLPP/PE multilayer film	Water	21 CFR 175.300	Fill boiling cool to 100 °F	< 0.10	0.5
	Heptane	21 CFR 175.300	120 °F 15 min.	0.13	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	0.18	0.5
MLFPP multilayer film	Water	21 CFR 175.300	Fill boiling cool to 100 °F	< 0.10	0.5
	Heptane	21 CFR 175.300	120 °F 15 min.	0.28	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	0.18	0.5
MLFPP/PE multilayer film	Water	21 CFR 175.300	Fill boiling cool to 100 °F	0.23	0.5
	Heptane	21 CFR 175.300	120 °F 15 min.	0.21	0.5
	8% v/v Ethanol	21 CFR 175.300	150 °F 2 hr.	0.23	0.5

Note: OML Res.: Overall Migration Results °F: degree Fahrenheit
Max. Per.: Max. Permissible Limit <: less than
mg/in^2: milligram per square inch

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Conclusions:

The submitted sample complies with Framework Regulation (EC) No. 1935/2004 and overall migration limit for fatty, acidic, milk products, aqueous and alcoholic foodstuffs, as required in Regulation (EU) 10/2011 and Israeli Standard 5113. It covers long term storage at room temperature and less severe conditions (refrigerated and deep-frozen storage), including heating up to 70 °C for up to 2 hours or up to 100 °C for 15 min. As well, for multilayer MLPP it covers 1h at 121°C.

The submitted sample complies with title 21 Code of Federal Regulations section 175.300 table 2 condition E and condition A (for MLPP) and less severe conditions, for all type of foods as described in section 175.300 table 1.

Approved By:

Israel Plastics and Rubber Center Tested by IPRC

T. Feiglin

Tehila Feiglin
Head of Department

Toby Levy Zimerman
Chemical Eng. – Polymer Chemist

End of Report