

Rapport No.: R/2035-1

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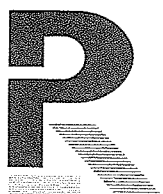
**Food Contact Plastic
Test Report**

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:	<ol style="list-style-type: none"> 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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 Ramat-Gan Branch: Shenkar College - 12, Anna Frank St., Ramat Gan 5252626, Israel, Tel: 972-3-6130111, Fax: 972-3-6130019
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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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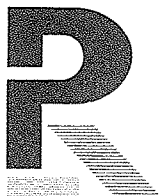
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3) Test Results

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) °C: degree Celsius
 Simulant D1: Ethanol 50% (v/v) <: less than
 Simulant D2: Oil
 mg/kg: milligram per kilogram of foodstuff
 mg/dm²: milligram per square decimeter



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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/in²: milligram per square inch



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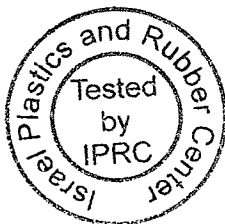
Conclusions:

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.

The results reported herein, relate only to the sample tested and do not necessarily represent the lot from which they originate. Unless otherwise stated, the samples have been freely selected, indexed and provided by the client. Without written permission of ISPLRC this test report is not permitted to be duplicated. This test report does not entitle to carry any safety mark on this or similar products. The use of ISIRAC symbol relates to tests which are included in the organization scope of accreditation and performed according to the accreditation rules as detailed in the accreditation certificate. The fatty simulants are not under the accreditation certificate. ISIRAC is not responsible for the results of the tests performed by the organization/research facility and accreditation/recognition does not constitute a certificate of approval of any item, system or process tested.

Approved By:



T. Feiglin

Tehila Feiglin
Head of Department

[Signature]

Toby Levy Zimerman
Chemical Eng. – Polymer Chemist

End of Report