



Test Certificate No.9912208792

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: | PVC |
| 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

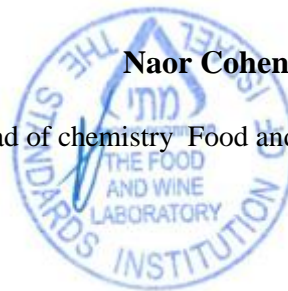
Head of Food Contact Material Section

Gadi Efrati

Naor Cohen

Acting Head of chemistry Food and Water Branch

Date: 24/09/2019



Certificate Number: AT-2045

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Description: PVC Sheet and thermoforming products from it. PVC 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 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 |
|---------------|--------------------|-----------------|------------------------|------------------|
| PVC | A (Ethanol 10%) | 10 days at 40°C | <1 | 10 |
| PVC | B (Acetic Acid 3%) | 10 days at 40°C | 1.4 | 10 |
| PVC | 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 (<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 |
|---------------|----------------|-----------------|--------------------|--------------|
| PVC | 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: E

| Tested sample | Simulants | Test conditions | Extractives, mg/in ² | Limit, mg/in ² |
|---------------|-----------------|-------------------------|---------------------------------|---------------------------|
| PVC | Distilled water | 24 hours 120 deg. F | <0.1 | 0.5 |
| PVC | Heptane | 30 minutes at 70 deg. F | <0.1 | 0.5 |
| PVC | Ethanol 8% | 24 hours at 120 deg. F | <0.1 | 0.5 |

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5. Lead, cadmium,mercury, hexavalent chromium Content in PVC 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> | - | 5 |
| <i>Cadmium (Cd),</i> | - | <19 |
| <i>Mercury (Hg)</i> | - | 7 |
| <i>Hexavalent Chromium (Cr (VI))</i> | - | 44 |
| <i>Sum of (Pb), (Cd), (Hg), (Cr (VI))</i> | 100 | <75 |

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