

Test Report No.





Date: 2-Apr-2024

Page 1 of 8

Client: Prepack Thailand Co., Ltd.

30/145,Moo1,

Khok Kham, Muang Samutsakhon, Samut Sakorn 74000 Thailand

The following sample(s) was/were submitted and identified by client as:

5851685

Sample Name : OPP/LLDPE Sample Description : Plastic bag

Manufacturer/Vendor : PREPACK THAILAND CO., LTD.

Country of Origin : Thailand

The following sample(s) was/were identified by SGS as:

SGS Sample No. : 6138280

Sample Condition : Sample is contained in a plastic bag.

Quantity Submitted : 1 pack

Sample Receiving Date : 11-Mar-2024

Testing Period : 11-Mar-2024 to 2-Apr-2024

Test Method & Results : Please refer to next page(s).

Signed for and on behalf of SGS (Thailand) Ltd.



Rutchuporn Moungsom

Toys and Hardlines Laboratory Manager

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Date: 2-Apr-2024



Page 2 of 8

Test Report No. 5851685
Test Requested & Result Summary

Test Requested: Please refer to the result summary (Test parameter(s) was/were selected by client).

Result Summary:

Test Requested Conclusion

Notification of the Ministry of Public Health (No.435) B.E. 2565 (2022) (List no.1): Qualities or standard for container made from plastic;

a) Overall migration

| 3% Acetic Acid (W/V) | PASS |
|--|------|
| 10% Ethanol (V/V) | PASS |
| 20% Ethanol (V/V) | PASS |
| Rectified Olive Oil | PASS |
| MPPO For dry food | PASS |
| b) Specific Migration of Heavy Metal | PASS |
| c) clause 4(5) Visible Color Migration | PASS |

Remark:

1. Test results in this report are applicable for the item tested and reflects the tested sample as received.

2. The decision rules based on simple acceptance which the probability of false accept may be as high as 50% in case the results is exactly on the tolerance limit.

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Page 3 of 8

Testing 1703 SGS (Thailand) Limited

Test Report No.

TEST RESULTS

Date: 2-Apr-2024

Notification of the Ministry of Public Health (No.435) B.E. 2565 (2022) (List no.1): Qualities or standard for container made from plastic;

a) Overall migration limits

Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test method (1st migration);

EN 1186-2:2022 Test methods for overall migration in vegetable oils

5851685

EN 1186-3:2022 Test methods for overall migration in evaporable simulants

EN1186-13:2002 Method B - adsorption by modified polyphenylene oxide

| Simulant Used | Test Condition | Result (1) (mg/dm2) | Reporting Limit (mg/dm2) | Permissible Limit (mg/dm2) |
|--|---------------------------|------------------------|--------------------------|-------------------------------|
| 3% Acetic Acid (W/V) | 10 days at 40 Degree C | ND | 3.0 | 10 |
| 10% Ethanol (V/V) | 10 days at 40 Degree C | ND | 3.0 | 10 |
| 20% Ethanol (V/V) | 10 days at 40 Degree C | ND | 3.0 | 10 |
| Rectified Olive Oil*** | 10 days at 40 Degree C | ND | 3.0 | 10 |
| Poly (2,6-diphenyl-p-phenylene oxide) (MPPO) | 10 days at 40 degree C | ND | 3.0 | 10 |
| Comment | | PASS | | |

Sample Description:

(1) Clear plastic bag (inside)

Note

- 1. mg/dm2 = milligram per square decimeter
- 2. Degree C = degree Celsius
- 3. ND = Not Detected

Remark:

- 1. Test condition & simulant were specified by client.
- 2. The ratio of surface area to volume is 1 dm2 per 4 g of MPPO in contact with.
- 3. The ratio of surface area to volume is 20 dm² per 1 kg of foodstuff in contact with.
- 4. The test item(s) marked *** on test report is/are analyzed at SGS (Thailand) Limited, address: 10, 10/1 4 and 12 Soi Rama III S. 59, Chong Nonsi, Yan Nawa, Bangkok.
- 5. The test result have been extracted from report number 5851675

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Test Report No. TEST RESULTS

5851685

Date: 2-Apr-2024

Page 4 of 8

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 $Unless \ otherwise \ stated \ the \ results \ shown \ in \ this \ test \ report \ refer \ only \ to \ the \ sample(s) \ received \ and \ such \ sample(s) \ are \ retained \ for \ 30 \ days \ only.$



TEST RESULTS





Test Report No. 5851685 Date: 2-Apr-2024 **Page 5 of 8**

b) Specific migration of heavy metal***

Method: With reference to EN 13130-1:2004. Analysis was performed by ICP-MS / ICP-OES.

Simulant Used: 3% acetic acid (w/v)

Test Condition: 40 Degree C for 10 Days (1st Migration)

Single-use article:

| Test Item | Result (1) (mg/kg) (1 st migration) | Reporting Limit (mg/kg) | Permissible Limit (mg/kg) |
|---------------------------------|---|----------------------------|------------------------------|
| Specific Migration of Aluminium | ND | 0.1 | 1 |
| Specific Migration of Antimony | ND | 0.01 | 0.04 |
| Specific Migration of Arsenic | ND | 0.01 | ND |
| Specific Migration of Barium | ND | 0.25 | 1 |
| Specific Migration of Cadmium | ND | 0.002 | ND |
| Specific Migration of Chromium | ND | 0.01 | ND |
| Specific Migration of Cobalt | ND | 0.01 | 0.05 |
| Specific Migration of Copper | ND | 0.25 | 5 |
| Specific Migration of Iron | ND | 5 | 48 |
| Specific Migration of Lead | ND | 0.01 | ND |
| Specific Migration of Lithium | ND | 0.1 | 0.6 |

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TEST RESULTS





Testing 1703 SGS (Thailand) Limited

Test Report No. 5851685

Date: 2-Apr-2024 Page 6 of 8

| Test Item | Result (1) (mg/kg) (1 st migration) | Reporting Limit (mg/kg) | Permissible Limit (mg/kg) |
|--|---|----------------------------|------------------------------|
| Specific Migration of Manganese | ND | 0.1 | 0.6 |
| Specific Migration of Mercury | ND | 0.01 | ND |
| Specific Migration of Nickel | ND | 0.01 | 0.02 |
| Specific Migration of Zinc | ND | 0.5 | 5 |
| Specific Migration of Europium | ND | 0.025 | - |
| Specific Migration of Gadolinium | ND | 0.025 | - |
| Specific Migration of Lanthanum | ND | 0.025 | - |
| Specific Migration of Terbium | ND | 0.025 | - |
| Specific Migration of Europium + Gadolinium + Lanthanum + Terbium | ND | | 0.05 |
| Comment | PASS | | |

Sample Description:

1. Clear plastic bag (inside)

- 1. mg/kg = milligram per kilogram of foodstuff in contact with
- 2. Degree C = degree Celsius
- 3. ND = Not Detected

Remark:

- 1. Test condition & simulant were specified by client.
- 2. The ratio of surface area to volume is 6 dm2 per 1 kg of foodstuff in contact with.
- 3. The test item(s) marked *** on test report is/are analyzed at SGS (Thailand) Limited, address: 10, 10/1 4 and 12 Soi Rama III S. 59, Chong Nonsi, Yan Nawa, Bangkok.
- 4. The test result have been extracted from report number 5851675

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TEST RESULTS





Test Report No. 5851685 Date: 2-Apr-2024 **Page 7 of 8**

c) clause 4(5) Visible Color Migration*

Method: With reference to Resolution AP (89) 1 and Kunststoffe im Lebensmittelverkehr, Part B II IX.

| Simulant Used | Result (1) | Requirement |
|----------------------|---------------------------|-------------------|
| 3% Acetic Acid (W/V) | No color release observed | No colour release |
| 20% Ethanol (V/V) | No color release observed | No colour release |
| Coconut Oil | No color release observed | No colour release |
| Comment | PASS | |

Sample Description:

1. Clear plastic bag (inside)

Note: 1. Requirement is according to Notification of the Ministry of Public Health (No.435) B.E. 2565 (2022): Qualities or standard for container made from plastic; clause 4(5).

Remark:Test(s) marked * on this report are not included in the NSC-ONSC accreditation scope.

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Test Report No. 5851685 Date : 2-Apr-2024

Page 8 of 8

SAMPLE/ATTACHMENT PICTURE



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