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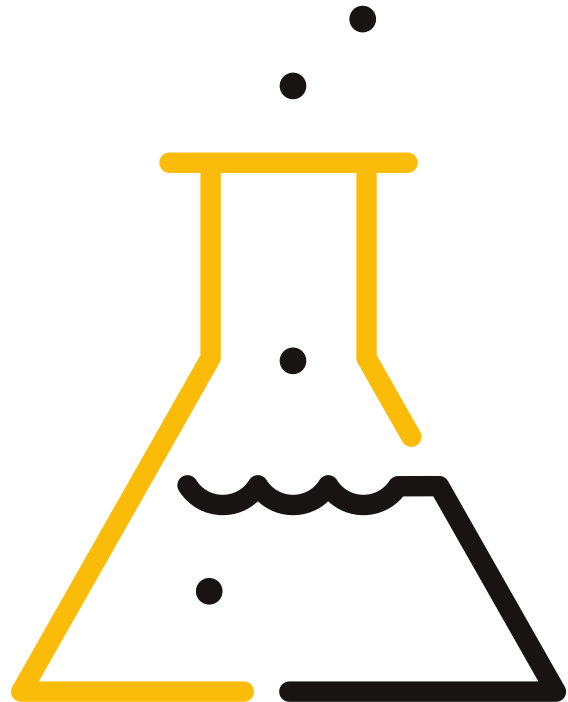
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TEST REPORT – RE32026-003C

_FILCOFLEX

MIGRATION TESTS ON PU-UF3

Filcoflex BV
Attn. Werner van Loon
Luxemburgstraat 3
5171PK, Kaatsheuvel
Netherlands



DATE
February 17, 2023

RE32026-003C_FILCOFLEX

February 17, 2023

This version will replace all previous versions.
Reason for revision: textual changes in conclusion.

Dear Mr. van Loon,

Hereby we present to you the results of the laboratory study, which was carried out in accordance with your request (ref. SO32026-003).

The general conditions of delivery for Intertek Polychemlab B.V., located in Geleen, the Netherlands, are applicable. These conditions are an integral part of all research carried out and the services and consultations provided; where appropriate, can be expanded upon by specific client agreement.

Samples of unknown origin can only be checked for plausibility to a limited extent. Results of the examination of these samples only relate to the samples as received by Intertek.

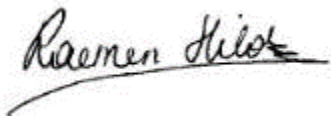
Intertek is not responsible for the data supplied by the client which may affect the validity of the analysis results.

Information on potential measurement uncertainty can be provided where requested.

We trust that this information will meet your approval.

Yours sincerely,

Intertek Polychemlab B.V.



Hilde Raemen
Application Specialist Food Contact

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1 INTRODUCTION

Filcoflex has requested Intertek Polychemlab to perform migration testing on a PU material according to the European, Chinese and FDA regulations.

The following test conditions are requested:

- 2 hours at 90°C – repeated use

This test condition also covers 24 hours at 60°C.

The PU material will be in contact with all types of foodstuffs. As requested by Filcoflex, the material will also be tested with MPPO as simulant for dry foodstuffs.

The composition of the PU (Platilon 4201 Y) has been shared by Covestro (the raw material supplier).

2 SAMPLES

2.1 Description of sample(s)

The samples were coded by Intertek with a unique Intertek LIMS number, as presented in table 1.

Table 1 Sample description

NO.	INTERTEK SAMPLE DESCRIPTION	CUSTOMER SAMPLE IDENTIFICATION	DATE RECEIVED	INTERTEK LIMS NUMBER
1	Opaque transparent plaques	PU-UF3 1,0mm opaque transparent Poly Urethane	09-04-2021	23151788

3 METHODS APPLIED

Migration testing has been performed according to

- Commission Regulation (EU) 10/2011
- GB 4806.7 – 2016: National Food Safety Standard – Food Contact Plastic Materials and Articles.
- GB 5009.156: National Food Safety Standard – General rules of the Migration Test Pretreatment methods of Food Contact Materials and Articles.
- GB 31604.1 – 2015: National Food Safety Standard – General rules for Migration Test of Food Contact Materials and Articles.



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3.1 Overall migration

Overall migration has been performed as described in Commission Regulation (EU) No. 10/2011 (including amendments) relating to plastic materials and articles intended to come in contact with food.

Test methods according to the parts of EN 1186 as listed below and where applicable updated by the provisions of the Regulation, which is more recent.

- EN 1186-1; Guide to the selection of conditions and test methods for overall migration.
- EN 1186-2; Test methods for overall migration into olive oil by total immersion.
- EN 1186-3; Test methods for overall migration into aqueous food simulants by total immersion.

The simulants and test conditions as listed in table 2 are chosen according to the rules as laid down in the Commission Regulation (EU) No. 10/2011 and based on the intended use.

According to (EU) 10/2011, testing with 3% acetic acid, 10% ethanol and olive oil will cover contact with all types of foodstuffs.

According to GB 31604.1-2015, testing with 4% acetic acid, 10% ethanol and olive oil will cover contact with all types of foodstuffs, with an alcohol content of maximum 10%.

Since 4% acetic acid can be seen as worst case for 3% acetic acid, the migration tests performed with 4% acetic acid, 10% ethanol and olive oil will cover both (EU) 10/2011 and GB 4806.7-2016 testing.

Repeated use articles:

As the sample is intended for repeated use, overall migration tests have been carried out three times on a single sample, using a new portion of food simulant on each run. Overall migration was subsequently determined according to the standards listed above. The overall migration result in the second run should be lower than in the first run, and the result of the third run should be lower than in the second run. Compliance with the overall migration limit was verified based on the result from the third run.

Because it is not technically feasible to test the same sample three times when testing in olive oil, the overall migration test has been carried out by testing three different samples for three different durations - one, two and three times the applicable contact test time. The difference between the third and the second run results was considered to represent the overall migration. Compliance was verified on the basis of this difference, which should not exceed the overall migration limit. In addition, it should not be higher than the first run result and the difference between the second and the first run results.

Table 2: Simulants and test conditions overall migration

SAMPLE	SIMULANTS	TEST CONDITIONS
1	10% ethanol	2 hours at 90 °C, repeated use
1	4% acetic acid	2 hours at 90 °C, repeated use
1	Olive oil	2 hours at 90 °C, repeated use

Tests in aqueous simulants have been performed in triplicate. Tests in olive oil have been performed in fourfold.



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3.2 Specific migration tests

Specific migration has been performed in accordance with Commission Regulation (EU) No. 10/2011 (including amendments) relating to plastic materials and articles intended to come in contact with food.

Exposure methods are according to EN 13130, where applicable updated by the provisions of the Regulation, which is more recent. Analytical methods are in-house methods.

3.2.1 Exposure to simulants

The sample was exposed to the simulants under the test conditions as described in table 3. These are chosen according to the rules as laid down in the Commission Regulation (EU) No. 10/2011 and based on the intended use.

According to (EU) 10/2011, testing with 3% acetic acid, 10% ethanol and olive oil will cover contact with all types of foodstuffs.

According to GB 31604.1-2015, testing with 4% acetic acid, 10% ethanol and olive oil will cover contact with all types of foodstuffs, with an alcohol content of maximum 10%.

Since 4% acetic acid can be seen as worst case for 3% acetic acid, the migration tests performed with 4% acetic acid, 10% ethanol and olive oil will cover both (EU) 10/2011 and GB 4806.7-2016 testing.

Repeated use articles:

As the sample is intended for repeated use, specific migration tests have been carried out three times on a single sample, using a new portion of food simulant on each run.

Table 3: Simulants and test conditions specific migration

SAMPLE	SIMULANTS	TEST CONDITIONS
1	10% ethanol	2 hours at 90 °C, repeated use
1	4% acetic acid	2 hours at 90 °C, repeated use
1	Olive oil	2 hours at 90 °C, repeated use
1	95% ethanol	1.5 hours at 60 °C, repeated use
1	Iso-octane	2 days at 60 °C, repeated use
1	Tenax®	2 hours at 90 °C, repeated use

Exposures have been performed in triplicate.

3.2.2 Analysis of specific migration components

The components listed in table 4 are subject to a specific migration limit (SML) set out in the Union list of Commission Regulation (EU) No. 10/2011.

This list is based on information provided by the client or its suppliers. Intertek cannot be held responsible for incorrect or incomplete information.

Compliance with the specific migration limit should be verified on the basis of the level of the specific migration found in the third test. The first and second tests are included to check if the specific migration does not increase with subsequent tests.



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Table 4: Specific migration components to be tested

SAMPLE	COMPONENT	CAS	SML (mg/kg food)	SIMULANTS	METHOD
1	Component A	Confidential	0.6	10% ethanol 4% acetic acid Olive oil Tenax®	GC-FID
1	Component B	Confidential	0.01	Material	LC-MS-MS
1	Component C	Confidential	5	10% ethanol 4% acetic acid Olive oil Tenax®	GC-FID TD-GC-MS (Tenax®)
1	Component D	Confidential	45	10% ethanol 4% acetic acid 95% ethanol Iso-octane Tenax®	UPLC-UV
1	Component E	Confidential	6	10% ethanol 4% acetic acid Olive oil Tenax®	UPLC-PDA
1	Component F	Confidential	3	10% ethanol 4% acetic acid 95% ethanol Iso-octane Tenax®	GC-FID
1	Component G	Confidential	18	10% ethanol 4% acetic acid 95% ethanol Iso-octane Tenax®	GC-FID

3.3 GB 4806.7-2016 test

Additional 4806.7 GB testing are performed by Intertek China, including:

- KMnO₄
- Heavy metal (as Pb)
- Sensory requirements



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4 RESULTS

4.1 Overall migration tests

Sample thickness:	1.1 mm
Contact area aqueous simulants:	1.2 dm ²
Volume aqueous simulants:	100 ml
Start date migration aqueous simulants:	22-04-2021
Contact area olive oil:	1.2 dm ²
Mass Olive oil:	80 g
Start date migration olive oil:	29-04-2021

The overall migration test results in aqueous simulants are presented in table 5 and are expressed in mg/dm².

For aqueous simulants, compliance with the overall migration limit should be verified on the basis of the level of the overall migration found in the third test. The first test is included to check if migration does not increase with subsequent tests.

Table 5: Overall migration results in 10% ethanol PU-UF3 1,0mm opaque transparent Poly Urethane

REPLICATES	10% ETHANOL [2 HOURS AT 90 °C] RUN 1 (mg/dm ²)	10% ETHANOL [2 HOURS AT 90 °C] RUN 2 (mg/dm ²)	10% ETHANOL [2 HOURS AT 90 °C] RUN 3 (mg/dm ²)
1	< 0.5	< 0.5	< 0.5
2	0.5	0.5	< 0.5
3	0.6	< 0.5	< 0.5
Mean result	0.5	0.5	< 0.5

Table 6: Overall migration results in 4% acetic acid PU-UF3 1,0mm opaque transparent Poly Urethane

REPLICATES	4% ACETIC ACID [2 HOURS AT 90 °C] RUN 1 (mg/dm ²)	4% ACETIC ACID [2 HOURS AT 90 °C] RUN 2 (mg/dm ²)	4% ACETIC ACID [2 HOURS AT 90 °C] RUN 3 (mg/dm ²)
1	0.7	0.5	< 0.5
2	0.8	< 0.5	0.8
3	0.5	< 0.5	< 0.5
Mean result	0.7	0.5*	0.6*

* these results lay within the analytical tolerance of the method. Therefore it can be concluded that the results don't increase in subsequent runs.



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The overall migration test results in olive oil are presented in table 7 and are expressed in mg/dm².

For olive oil, the difference between the third and the second test results should be considered to represent the overall migration. Compliance should be verified on the basis of this difference, which should not exceed the overall migration limit. In addition, it should not be higher than the first result and the difference between the second and the first test results.

Table 7: Overall migration results in olive oil PU-UF3 1,0mm opaque transparent Poly Urethane

REPLICATES	OLIVE OIL [2 HOURS AT 90 °] RUN 1 (mg/dm ²)	OLIVE OIL [2 HOURS AT 90 °] RUN 2 – RUN 1 (mg/dm ²)	OLIVE OIL [2 HOURS AT 90 °] RUN 3 – RUN 2 (mg/dm ²)
1	8.6	4.0	< 1
2	8.3	3.2	1.8
3	8.0	3.0	2.2
4	8.0	2.6	2.1
Mean result	8.2	3.2	1.8

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4.2 Specific migration tests

4.2.1 Method development – validation parameters

Intertek successfully developed analytical methods for component D in Tenax®.

The summary of the validation parameters is presented in table 8.

Table 8: Summary of validation parameters Component D

SIMULANT	LOQ (mg/L)	VC _R (%)	VC _{RW} (%)	RECOVERY (%)	U (%)	MEASURING RANGE (mg/L)
Tenax®	5.5	1.02	0.84	102.0	1.69	5.5 - 122.6

LOQ: Limit of quantification

VC_R: Variation coefficient repeatability

VC_{RW}: Variation coefficient reproducibility

U: Measurement uncertainty

Intertek successfully developed analytical methods for component G in 10% ethanol and 4% acetic acid.

Table 9: Summary of validation parameters

SIMULANT	LOQ (mg/L)	VC _R (%)	VC _{RW} (%)	RECOVERY (%)	U (%)	MEASURING RANGE (mg/L)
10% ethanol	0.27	1.65	1.44	96.1	2.28	0.27 – 53.70
4% acetic acid	0.27	1.23	4.42	99.3	8.84	0.27 – 53.70

LOQ: Limit of quantification

VC_R: Variation coefficient repeatability

VC_{RW}: Variation coefficient reproducibility

U: Measurement uncertainty

The measuring range is expressed in mg/l. The upper concentration level of the measuring range equals 2 x SML expressed in mg/kg food, based on the conventional EU food contact ratio of 1 kg of food in contact with 6 dm² of surface area.

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4.2.2 Specific migration results

Sample thickness:	1.1 mm
Contact area aqueous simulants:	1.2 dm ²
Volume aqueous simulants:	100 ml
Contact area olive oil:	1.2 dm ²
Mass Olive oil:	90 g
Contact area Tenax®:	2.00 dm ²
Mass Tenax®:	8 g
Start date migration:	22-04-2021
Analysis period:	Week 18 – week 19

The specific migration test results are mentioned in table 10-15 and are expressed in mg/kg foodstuff, based on the conventional EU food contact ratio of 1 kg of food in contact with 6 dm² of surface area.

Compliance with the specific migration limit is verified on the basis of the level of the specific migration found in the third test. The first and second tests are included to check if the specific migration does not increase with subsequent tests.

For components that are prohibited from migrating or from being released in detectable quantities, should already comply in the first run.

Table 10: Specific migration results 10% ethanol PU-UF3 1,0mm opaque transparent Poly Urethane

10% ETHANOL, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component A	0.6	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	Pass
Component C	5	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	Pass
Component D	45	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	Pass
Component E	6	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	Pass



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10% ETHANOL, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component F	3	<0.3 <0.3 <0.3 Mean: <0.3	<0.3 <0.3 <0.3 Mean: <0.3	<0.3 <0.3 <0.3 Mean: <0.3	Pass
Component G	18	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	Pass

Table 11: Specific migration results 4% acetic acid PU-UF3 1,0mm opaque transparent Poly Urethane

4% ACETIC ACID, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component A	0.6	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	Pass
Component C	5	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	Pass
Component D	45	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	Pass
Component E	6	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	< 1 < 1 < 1 Mean: < 1	Pass
Component F	3	<0.3 <0.3 <0.3 Mean: <0.3	<0.3 <0.3 <0.3 Mean: <0.3	<0.3 <0.3 <0.3 Mean: <0.3	Pass
Component G	18	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	Pass



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Table 12: Specific migration results olive oil PU-UF3 1,0mm opaque transparent Poly Urethane

OLIVE OIL, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component A	0.6	<0.2 <0.2 <0.2 Mean: < 0.2	<0.2 <0.2 <0.2 Mean: < 0.2	<0.2 <0.2 <0.2 Mean: < 0.2	Pass
Component C	5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	Pass
Component E	6	4.10 4.14 4.16 Mean: 4.14	1.92 1.87 1.78 Mean: 1.86	1.83 2.26 2.23 Mean: 2.11	Pass

Table 13: Specific migration results 95% ethanol PU-UF3 1,0mm opaque transparent Poly Urethane

95% ETHANOL, 1.5 HOURS AT 60 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component D	45	83.8 ± 8.4 90.1 ± 9.0 98.6 ± 9.9 Mean: 91.1 ± 9.1	40.0 ± 4.0 39.6 ± 4.0 45.2 ± 4.5 Mean: 41.6 ± 4.2	21.7 ± 2.2 20.8 ± 2.1 20.5 ± 2.1 Mean: 21.0 ± 2.1	Pass
Component F	3	2.30 ± 0.11 2.55 ± 0.13 2.71 ± 0.14 Mean: 2.52 ± 0.13	0.65 ± 0.03 0.54 ± 0.03 0.52 ± 0.03 Mean: 0.57 ± 0.03	<0.3 <0.3 <0.3 Mean: <0.3	Pass
Component G	18	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	Pass



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Table 14: Specific migration results iso-octane PU-UF3 1,0mm opaque transparent Poly Urethane

ISO-OCTANE, 2 DAYS AT 60 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component D	45	< 6 < 6 < 6 Mean: < 6	< 6 < 6 < 6 Mean: < 6	< 6 < 6 < 6 Mean: < 6	Pass
Component F	3	4.48 ± 0.22 4.63 ± 0.23 4.59 ± 0.23 Mean: 4.57 ± 0.0.23	<0.3 <0.3 <0.3 Mean: <0.3	<0.3 <0.3 <0.3 Mean: <0.3	Pass
Component G	18	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	Pass

Table 15: Specific migration results Tenax® PU-UF3 1,0mm opaque transparent Poly Urethane

TENAX®, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component A	0.6	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	<0.1 <0.1 <0.1 Mean: < 0.1	Pass
Component C	5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	< 1.5 < 1.5 < 1.5 Mean: < 1.5	Pass
Component D	45	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	< 4.5 < 4.5 < 4.5 Mean: < 4.5	Pass
Component E	6	< 0.6 < 0.6 < 0.6 Mean: < 0.6	< 0.6 < 0.6 < 0.6 Mean: < 0.6	< 0.6 < 0.6 < 0.6 Mean: < 0.6	Pass
Component F	3	1.41 ± 0.07 1.10 ± 0.05 1.29 ± 0.06 Mean: 1.27 ± 0.06	0.67 ± 0.03 0.74 ± 0.04 0.73 ± 0.04 Mean: 0.72 ± 0.04	0.55 ± 0.03 0.45 ± 0.02 0.49 ± 0.02 Mean: 0.50 ± 0.02	Pass

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TENAX®, 2 HOURS AT 90 °C (mg/kg)					
COMPONENT	SML (mg/kg)	RUN 1	RUN 2	RUN 3	CONCLUSION
Component G	18	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	< 1.8 < 1.8 < 1.8 Mean: < 1.8	Pass

For component B, the residual content in the sample has been determined. Based on the ratio between the mass and surface area of the sample and the standard EU ratio of 6 dm² surface area in contact with 1 kg of food, a worst case calculation assuming 100% migration of the residual content has been performed.

The results of the residual content analysis are expressed in mg/kg finished article and the results of the worst case calculations are expressed in mg/kg food, both mentioned in table 16.

Table 16: Residual content and worst case migration calculation PU-UF3 1,0mm opaque transparent Poly Urethane

COMPONENT	RESTRICTION	RESIDUAL CONTENT (mg/kg material)	RATIO MASS/SURFACE AREA (g/dm ²)	WORST CASE CALCULATION MIGRATION (mg/kg food)
Component B	SML = 0.01 QM = 1	< 0.1 < 0.1 < 0.1 Mean: < 0.1	5.7034	< 0.004 < 0.004 < 0.004 Mean: < 0.004

4.3 GB 4806.7-2016 test

A summary of the results of the 4806.7 GB testing are mentioned in table 17. The full report SHAH01362774 can be found in Appendix I.

Table 17: Summary results 4806.7 GB testing on Sample PU-UF3 1,3 mm opaque transparent Poly Urethane

TESTED SAMPLE	STANDARD	RESULTS
SOLTANE F/B 197	GB 4806-7-2016; <i>National food safety standards for food contact plastic materials and products</i>	
	Sensory index	PASS
	Potassium Permanganate consumption determination	PASS
	Heavy metal (Pb)	PASS



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5 CONCLUSIONS

5.1 Overall migration tests

The overall migration results obtained from PU-UF3 1,0mm opaque transparent Poly Urethane were found to be in compliance with the overall migration limit (10 mg/dm²) as defined in Commission Regulation (EU) No. 10/2011 (including amendments) for food contact materials and GB 4806.7 – 2016: National Food Safety Standard – Food Contact Plastic Materials and Articles relating to plastic materials and articles intended to come in contact with food for the tests with 10% ethanol, 4% acetic acid and olive oil under the above mentioned test conditions.

5.2 Specific migration tests

The specific migration results obtained for all components from PU-UF3 1,0mm opaque transparent Poly Urethane were found to be in compliance with their respective specific migration limits as defined in Commission Regulation (EU) No. 10/2011 (including amendments) for food contact materials for the tests with 10% ethanol, 4% acetic acid, olive oil, 95% ethanol, iso-octane and Tenax® under the above mentioned test conditions.

5.3 GB 4806.7-2016 test

The sample PU-UF3 1,0mm opaque transparent Poly Urethane passes the requirements as laid down in the GB 4806.7-2016 for the tests as performed under the conditions as mentioned in the test report (Appendix I).



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APPENDIX I: REPORT SHAH01362774



Test Report

Number: SHAH01362774

Applicant: INTERTEK POLYCHEMLAB - HILDE RAEMEN
KOOLWATERSTOFSTRAAT 1, 6161 RA GELEEN,
THE NETHERLANDS
Attn: HILDE RAEMEN

Date: Jul 20, 2021

Sample Description:

One (1) submitted sample said to be:

Item Name : (1) PU-UF3,1,0 mm Opaque Transparent Poly Urethane, LIMS: 23181831(SO32026-004).

Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

To be continued.

Authorized By:
For Intertek Testing Services Ltd., Shanghai

Bill Zhang
General Manager



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Total Quality. Assured.

Test Report

Number: SHAH01362774

Tests Conducted

Food contact materials and products

As per GB 4806.7-2016 "National food safety standards for food contact plastic materials and products".

I. Sensory Index

Appearance of sample: Normal color, odorless, no impurity.

Soaking liquid of sample: No turbidity, no precipitation, odorless, and no other sensory deterioration.

II. Physicochemical Index

2 Potassium Permanganate consumption determination (Distilled water, 60°C, 2 hours)
(Testing method: GB31604.2-2016)

Tested Component	Tested Result (mg/kg)	Limit (mg/kg)
(1)	1.6	10

3 Heavy metal (Pb) (4% (v/v) Acetic acid, 60°C, 2 hours)
(Testing method: GB31604.9-2016)

Tested Component	Tested Result (mg/kg)	Limit (mg/kg)
(1)	<1.0	1

Detection limit: Potassium Permanganate consumption determination 1.0 mg/kg
Heavy metal (Pb) 1 mg/kg

Conclusion:

Tested Sample	Standard	Result
Tested component of submitted sample	GB 4806.7-2016 "National food safety standards for food contact plastic materials and products"	
	- Sensory Index	PASS
	- Potassium Permanganate consumption determination	PASS
	- Heavy metal (Pb)	PASS

Remark: The testing results are only valid for the sample tested. Without consent of the testing organization, the clients shall not be unauthorized use of test result for improper propaganda. Test results are for internal reference only.

Tested Component:

(1) PU-UF3,1,0 mm Opaque Transparent Poly Urethane, LIMS: 23181831(SO32026-004).

Date sample received: Jul 13, 2021

Testing Period: Jul 13, 2021 to Jul 19, 2021

To be continued.



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Test Report

Number: SHAH01362774

Tests Conducted



End of report.

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

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