

PPWR Megfeleléségi Nyilatkozat

Kibocsátó: BCL Kft.

Székhely: 8000 Székesfehérvár, Zsurló utca 10

Adószám: 11602943-2-07

Kapcsolattartó: Debreceni Renáta (debreceni.renata@bcl.hu)

1. A nyilatkozat azonosítószáma: PPWR/NY/1

2. A nyilatkozat tárgya

A BCL Kft. ezúton kijelenti, hogy az általa gyártott / forgalmazott csomagolóanyagok és csomagolási megoldások megfelelnek az Európai Parlament és a Tanács **PPWR – Packaging and Packaging Waste Regulation** (2025/40 EU rendelet) előírásainak.

Csomagolóanyag:

Hullámpapír csomagolóanyag

Szállító: SIBO Csomagolástechnikai Kft.

3. Megfeleléség tartalma

A BCL Kft. biztosítja, hogy a csomagolóanyagok:

- **Aggodalomra okot adó anyagok:** nem tartalmaznak / a határérték alatti mennyiségben tartalmaznak a PPWR és a kapcsolódó REACH/CLP szabályozások által tiltott vagy korlátozott anyagokat.

4. Dokumentáció és nyomon követhetőség

A BCL Kft. vállalja, hogy:

- biztosítja a PPWR szerinti **műszaki dokumentációt**,
- fenntartja a gyártási és beszállítói lánc **nyomon követhetőségét**,
- a dokumentumokat a hatóságok kérésére **haladéktalanul rendelkezésre bocsátja**.

5. Felelősségvállalás

A BCL Kft. kijelenti, hogy a fentiekben megfogalmazottak a beszállítók által megadott információkon és dokumentumokon alapulnak. A vállalat minden szükséges intézkedést megtett a PPWR követelményeinek való megfelelés érdekében.

6. Ez a megfeleléségi nyilatkozat az előállító kizárólagos felelőssége mellett került kiállításra.

7. A nyilatkozat 1. pontban említett tárgya megfelel (hiv.: 4. pont) a releváns uniós harmonizációs jogszabályoknak:

- 2019/1020: A piacfelügyeletről és a termékek megfeleléségéről szóló rendelete

- 2019/904: Egyes műanyagtermékek környezetre gyakorolt hatásának csökkentéséről szóló rendelet

- 94/62/EC: A csomagolásról és a csomagolási hulladékról szóló rendelet

- 97/129/EC: A csomagolásról és a csomagolási hulladékról szóló irányelv

8. Adott esetben a bejelentett szervezet(ek):

SIBO Csomagolástechnikai Kft.: 8132 Lepsény, Rákóczi utca 8. 2026.04.20-i nyilatkozat

A nyilatkozat a következő nevében és megbízásából kerül aláírásra:

Kelt.: Székesfehérvár, 2026.06.30



BCL Kereskedelmi és Szolgáltató Kft.
Zsurló u. 10.
Alba Ipari Zóna
Adószám:
11692843-2-07

Székely Balázs
Ügyvezető
BCL Kft.

PPWR megfelelési nyilatkozat

1. Nyilatkozattevő adatai

- **Gyártó / Forgalmazó neve:** SIBO Csomagolástechnikai Kft.
- **Székhely:** 8132 Lepsény, Rákóczi u. 8.

2. A termék azonosítása

- **Termék megnevezése:** Hullámpapír csomagolóanyag
- **Termékkategória:** Papír és karton alapú csomagolás
- **Felhasználási cél:** Szállítási és/vagy gyűjtőcsomagolás

3. Megfelelési nyilatkozat

Ezúton nyilatkozunk, hogy a fent megjelölt **hullámpapír csomagolóanyag** megfelel az alábbi jogszabályi követelményeknek:

- az **Európai Parlament és a Tanács Csomagolásról és Csomagolási Hulladékról szóló Rendeletének (PPWR)** előírásainak,
- továbbá az alkalmazandó uniós és nemzeti jogszabályoknak.

4. Anyagösszetétel és újrahasznosíthatóság

- A termék **100%-ban újrahasznosított papír alapanyagból** készült.
- A csomagolóanyag **teljes mértékben újrahasznosítható**, és megfelel a PPWR újrahasznosíthatóságra vonatkozó követelményeinek.
- A termék megfelel a **körforgásos gazdaság** elveinek, és elősegíti a csomagolási hulladék csökkentését.

5. Veszélyes anyagokra vonatkozó megfelelés

A hullámpapír termék:

- nem tartalmaz a PPWR és az egyéb vonatkozó uniós jogszabályok által korlátozott mennyiség feletti veszélyes anyagokat,
- megfelel a **nehézfém-tartalomra és egyéb veszélyes komponensekre** vonatkozó határértékeknek.

- A veszélyes komponensek mennyiségét és megfelelőségét igazoló dokumentáció **mellékletként csatolásra került**, amely a nyilatkozat szerves részét képezi.

6. Megfelelőség igazolása

Jelen nyilatkozat a rendelkezésre álló:

- alapanyag-nyilatkozatok,
- beszállítói megfelelőségi dokumentumok,
- laboratóriumi vizsgálati jegyzőkönyvek alapján készült.

A dokumentáció kérésre a hatóságok és üzleti partnerek részére bemutatható.

7. Felelősségvállalás

Alulírott kijelentem, hogy a fenti adatok a valóságnak megfelelnek, és a termék megfelel a PPWR rendelet vonatkozó előírásainak.

Kelt: Lepsény, 2026.04.20.

Név: Farkas István

Beosztás: MIR, KIR vezető

Aláírás:

SIBO Csomagolástechnikai Kft.
H-8132 Lepsény, Rákóczi u. 8.
Tel.: +36-22/585-242
Adószám: 25015458-2-07
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Aschaffenburg, 4 December 2024

From: Be-ci
Authorized by: Behrendt

REPORT

Order No.: 13934/44 **Page 1 of 14 pages**

Client: Progroup Board GmbH
Horstring 12
76829 Landau
Germany

Date of order: 15 July 2024

Receipt of sample material: 23 July 2024

Origin of sample material: From the client

Purpose: Analysis of corrugated board grades for their compliance
with the demands on food contact materials


(Dr. Derra)
Managing Director


(Behrendt)
Officially certified
and authorized food
chemist

The present report exclusively refers to the samples mentioned. It meets the requirements of the DIN EN ISO/IEC 17025:2018 for simplified test reports. Additional information and statistical data on the results are available upon request.

Sample Material

For analysis the following sample material was in hand:

Sample 1:	1.24 B X2
Sample 2:	1.10B N2
Sample 3:	1.36B C2
Sample 4:	1.55B X6
Sample 5:	1.22C X1
Sample 6:	2.50 BC N2
Sample 7:	3.90 AAC
Sample 8:	2.71 BC N1
Sample 9:	3.95 AAC
Sample 10:	2.90 BC
Sample 11:	3.96 AAC
Sample 12:	2.92 AC
Sample 13:	3.92 AAC
Sample 14:	3.91 AAC
Sample 15:	2.35BE
Sample 16:	1.25E
Sample 17:	1.03B W1
Sample 18:	1.27E L2
Sample 19:	1.02B N2
Sample 20:	1.26B C2

If not stated differently, the samples 1 – 10 were analysed as mixed sample 1 (MP1) and the samples 11 – 20 as mixed sample 2 (MP2).

Carrying out of the Tests

Examination period: 22 October 2024 to 27 November 2024

1. Determination of the Grammage *

The determination was performed according to DIN EN ISO 536:2012-11 after conditioning of the sample at 23 °C/50 % relative humidity which is prescribed as standard atmosphere with a reduced amount of test specimens.

Result:

Sample MP1:	727	g/m ²	±	678	g dry matter/m ²
Sample MP2:	927	g/m ²	±	867	g dry matter/m ²

2. Determination of the Moisture Content *

The determination was performed as single determination according to DIN EN ISO 638-1:2022-07 in the condition as received.

Result:

Sample MP1:	6.3	%
Sample MP2:	6.4	%

3. Preparation of Extracts *

The extracts were prepared according to the "Methodensammlung zur Untersuchung von Papier, Karton und Pappe für den Lebensmittelkontakt" (collection of methods for the examination of paper and board for food contact) of the BfR as well as according to DIN EN 645:1994-01, 647:1994-01 and 15519:2008-01. The selection of suitable procedures for simulating the transfer of substances was performed according to the corresponding BfR guideline ("Leitfaden zur Überprüfung der Stoffübergänge von Bedarfsgegenständen aus Papier, Karton und Pappe").

Water: 24 hours at 23 °C

4. Determination of Methanal (Formaldehyde) in the Water Extract *

The determination was performed according to DIN EN 1541:2001-07 photometrically in line with the acetylacetone method.

Result:

Sample MP1:	not quantifiable	< 0.004	mg/g dry matter
Sample MP2:	not quantifiable	< 0.004	mg/g dry matter

5. Determination of Phthalates *

The determination was performed according to SOP 160.200 by means of GCMS in an acetone extract. The following compounds were considered:

Dimethyl phthalate	(DMP)	[131-11-3]
Diethyl phthalate	(DEP)	[84-66-2]
Diisobutyl phthalate	(DIBP)	[84-69-5]
Dibutyl phthalate	(DBP)	[84-74-2]
Di(2-ethylhexyl) phthalate	(DEHP)	[117-81-7]
Di-n-octyl phthalate	(DOP)	[117-84-0]
Benzylbutyl phthalate	(BBP)	[85-68-7]
Diisononyl phthalate	(DINP)	[68515-48-0]
Diisodecyl phthalate	(DIDP)	[26761-40-0]

Limit of quantitation: Diisononyl phthalate and Diisodecyl phthalate 10 mg/kg dry matter
All other compounds 1 mg/kg dry matter

Result:

Sample MP1:

Diisobutyl phthalate	2.0	mg/kg dry matter
Dibutyl phthalate	2.7	mg/kg dry matter
Di(2-ethylhexyl) phthalate	9.1	mg/kg dry matter

The remaining compounds were not quantifiable.

Sample MP2:

Diisobutyl phthalate	1.7	mg/kg dry matter
Dibutyl phthalate	2.7	mg/kg dry matter
Di(2-ethylhexyl) phthalate	8.7	mg/kg dry matter

The remaining compounds were not quantifiable.

6. Determination of o-Phenylphenol [90-43-7] in the Water Extract *

The determination was performed according to SOP 162.200 by means of HPLC-UV.

Result:

Sample MP1:	not determinable	< 0.7 ¹⁾	mg/kg dry matter
Sample MP2:	not determinable	< 0.7 ¹⁾	mg/kg dry matter

¹⁾ The determination limit was raised due to matrix effects.

7. Determination of Polycyclic Aromatic Hydrocarbons (PAH) *

The determination was performed according to the draft standard by means of GCMS. The following compounds were considered:

Naphthalene	[91-20-3]	Benzo[b]naphtho[1,2-d]thiophene	[205-43-6]
2-Methyl naphthalene	[91-57-6]	Benzo[a]anthracene	[56-55-3]
1-Methyl naphthalene	[90-12-0]	Triphenylene/Chrysene	[217-59-4]/[218-01-9]
Acenaphthylene	[208-96-8]	Benzo[b]fluoranthene	[205-99-2]
Acenaphthene	[83-32-9]	Benzo[k]fluoranthene	[207-08-9]
Fluorene	[86-73-7]	Benzo[e]pyrene	[192-97-2]
Phenanthrene	[85-01-8]	Benzo[a]pyrene	[50-32-8]
Anthracene	[120-12-7]	Perylene	[198-55-0]
2-Methyl phenanthrene	[2531-84-2]	Indeno[1,2,3-cd]pyrene	[193-39-5]
Fluoranthene	[206-44-0]	Dibenzo[a,h]anthracene	[53-70-3]
Pyrene	[129-00-0]	Benzo[g,h,i]perylene	[191-24-2]
Benzo[c]phenanthrene	[195-19-7]		

Limits of quantitation:

Acenaphthylene, Fluorene, Fluoranthene, Triphenylene/Chrysene 0.03 mg/kg dry matter;
all other compounds 0.02 mg/kg dry matter.

Result:

Sample MP1:

Phenanthrene	0.021	mg/kg dry matter
Pyrene	0.021	mg/kg dry matter

Further compounds listed above were not quantifiable.

Sample MP2:

Phenanthrene	0.021	mg/kg dry matter
Pyrene	0.026	mg/kg dry matter

Further compounds listed above were not quantifiable.

8. Determination of the pH value *

The determination was performed according to ISO 6588 from a cold water extract.

Result:

Sample MP1:	7.2
Sample MP2:	7.2

9. Determination of the Transfer of Antimicrobial Constituents *

The determination was made according to DIN EN 1104:2019-01. Test specimens of a diameter of 10 mm were placed onto an inoculated nutrient medium and then incubated. The inhibition zone is indicated as total diameter (including the test specimen).

Result:

Sample 1:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 2:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Partially no growth of the test microorganism with an overall diameter of 13 mm. Presence of a microbial contaminant of ≥ 2 mm around the test pieces.

Comment:

An evaluation of the presence of an inhibition zone is prevented by the presence of a microbial contaminant.

Sample 3:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 4, 5 + 7:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 6:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. An evaluation of the presence of an inhibition zone is prevented by the presence of a microbial contaminant.

Comment:

An evaluation of the presence of an inhibition zone is prevented by the presence of a microbial contaminant.

Sample 8 + 9:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *B. subtilis* growth at the edges of the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 10:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 11+12:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *B. subtilis* growth at the edges of the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 13 + 14:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *B. subtilis* growth at the edges of the test pieces. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 15 - 17:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 18:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

Sample 19 + 20:

with *Aspergillus niger*: Microbial growth up to the edges of the test specimens. Presence of a modification of the test microorganism *A. niger* growth at the edges of the test pieces.

with *Bacillus subtilis*: Microbial growth up to the edges of the test specimens. Presence of a microbial contaminant of < 2 mm around the test pieces.

Comment:

The proof of the presence of an inhibition zone is provided by the absence of test microorganism growth in a minimum diameter of 14 mm.

Therefore, a transfer of antimicrobial constituents is considered as not detected.

10. Determination of Per- and Polyfluoro Alkyl Substances (PFAS)

The determination was performed according to SOP 162.200 by means of LCMS in a methanol extract. The following compounds were considered:

Perfluoro alkyl acids:

- butanoic	(PFBA)	[375-22-4]
- pentanoic	(PFPeA)	[2706-90-3]
- hexanoic	(PFHxA)	[307-24-4]
- heptanoic	(PFHpA)	[375-85-9]
- octanoic	(PFOA)	[335-67-1]
- nonanoic	(PFNA)	[375-95-1]
- decanoic	(PFDA)	[335-76-2]
- undecanoic	(PFUnDA)	[2058-94-8]
- dodecanic	(PFDoDA)	[307-55-1]
- tridecanoic	(PFTrDA)	[72629-94-8]
- tetradecanoic	(PFTeDA)	[376-06-7]
- hexadecanoic	(PFHxDA)	[67905-19-5]
- octadecanoic	(PFOcDA)	[16517-11-6]

Perfluoro alkyl sulfonic acids:

- butane sulfonic	(PFBS)	[375-73-5]
- pentane sulfonic	(PFPeS)	[2706-91-4]
- hexane sulfonic	(PFHxS)	[355-46-4]
- heptane sulfonic	(PFHpS)	[375-92-8]
- octane sulfonic	(PFOS)	[1763-23-1]
- nonane sulfonic	(PFNS)	[68259-12-1]
- decane sulfonic	(PFDS)	[335-77-3]
- undecane sulfonic	(PFUnDS)	[749786-16-1]
- dodecane sulfonic	(PFDoS)	[79780-39-5]
- tridecane sulfonic	(PFTrDS)	[791563-89-8]

H4-Polyfluoro octane sulfonic acid	(H4PFOS)	[27619-97-2]
Perfluorooctane sulfonamide	(PFOSA)	[754-91-6]

Limit of quantitation: 0.01 mg/kg

Result:

Sample MP1 + MP2:

None of the above-listed compounds were quantifiable.

11. Determination of Bisphenol A [80-05-7] and Bisphenol S [80-09-1] in the Water Extract *

The determination was performed according to SOP 162.200 by means of HPLC-fluorescence or HPLC-UV.

Result:

Sample MP1:

Bisphenol A	0.014	mg/l extract
Bisphenol S	0.17	mg/l extract

Sample MP2:

Bisphenol A	0.014	mg/l extract
Bisphenol S	0.15	mg/l extract

12. Determination of Recycling Contaminants

The determination was performed according to SOP 162.200 by means of LCMS in an acetonitrile extract. The following compounds were considered:

Benzophenone	[119-61-9]
2-Methylbenzophenone	[131-58-8]
3-Methylbenzophenone / 4-Methylbenzophenone	[643-65-2] / [134-84-9]
2-Hydroxybenzophenone	[117-99-7]
4-Hydroxybenzophenone	[1137-42-4]
4,4'-Bis(dimethylamino)-benzophenone (Michler's ketone)	[90-94-8]
4,4'-Bis(diethylamino)-benzophenone (DEAB)	[90-93-7]
Bisphenol A	[80-05-7]
Bisphenol S	[80-09-1]
Bisphenol B	[77-40-7]
Bisphenol F	[620-92-8]
N-(p-toluenesulfonyl)-N'-(3-(p-toluene-sulfonyloxy)phenyl) (Pergafast 201)	[232938-43-1]
m-Aminophenol p-toluenesulfonate (m-Aminophenyl tosylate)	[3865-15-4]
N-(Methoxycarbonyl)-p-toluenesulfonamide (Methyl tosylcarbamate)	[14437-03-7]
2-Ethylhexyl 4-dimethylaminobenzoate (EHDAB)	[21245-02-3]
Ethyl 4-dimethylaminobenzoate (EDAB)	[10287-53-3]
2-Isopropylthioxanthone (ITX)	[5495-84-1]
4-Diethylaminobenzaldehyde	[120-21-8]
1-Hydroxycyclohexyl phenyl ketone	[947-19-3]

Limit of quantitation: 0.1 mg/kg

Result:

Sample MP1:

Benzophenone	1.5	mg/kg
Bisphenol A	1.0	mg/kg
Bisphenol S	1.5	mg/kg
4,4'-Bis(diethylamino)-benzophenone (DEAB)	0.23	mg/kg
3-Methylbenzophenone / 4-Methylbenzophenone	0.59	mg/kg
4,4'-Bis(dimethylamino)-benzophenone (Michler's ketone)	0.33	mg/kg
N-(p-toluenesulfonyl)-N'-(3-(p-toluene-sulfonyloxy)phenyl) (Pergafast 201)	0.35	mg/kg
2-Isopropylthioxanthone (ITX)	0.18	mg/kg
m-Aminophenol p-toluenesulfonate (m-Aminophenyl tosylate)	0.16	mg/kg
1-Hydroxycyclohexyl phenyl ketone	0.22	mg/kg

Further compounds listed above were not quantifiable.

Sample MP2:

Benzophenone	1.6	mg/kg
Bisphenol A	1.0	mg/kg
Bisphenol S	1.4	mg/kg
4,4'-Bis(diethylamino)-benzophenone (DEAB)	0.23	mg/kg
3-Methylbenzophenone / 4-Methylbenzophenone	0.67	mg/kg
4,4'-Bis(dimethylamino)-benzophenone (Michler's ketone)	0.33	mg/kg
N-(p-toluenesulfonyl)-N'-(3-(p-toluene-sulfonyloxy)phenyl) (Pergafast 201)	0.34	mg/kg
2-Isopropylthioxanthone (ITX)	0.19	mg/kg
m-Aminophenol p-toluenesulfonate (m-Aminophenyl tosylate)	0.14	mg/kg
1-Hydroxycyclohexyl phenyl ketone	0.17	mg/kg

Further compounds listed above were not quantifiable.

13. Determination of Vinylchloride [75-01-4] *

The determination was performed according to SOP 160.200 by means of HeadspaceGC-MS.

Result:

Sample MP1:	not quantifiable	<	0.5	mg/kg
Sample MP2:	not quantifiable	<	0.5	mg/kg

14. Determination of Vinylidene Chloride [75-35-4] *

The determination was performed according to SOP 160.200 by means of Headspace-GCMS.

Result:

Sample MP1:	not quantifiable	<	0.5	mg/kg
Sample MP2:	not quantifiable	<	0.5	mg/kg

15. Determination of the Specific Migration into Tenax® (Modified Polyphenylene Oxide)

*

The migration was performed as a single fold determination according to DIN EN 14338:2004-03.

Conditions: 10 days at 40 °C

Testing procedure: one-sided contact (food contact side)

Subsequently, the volatile components adsorbed onto Tenax were extracted.

15.1. Gas chromatographic Analysis

The determination was performed according to SOP 160.200 by means of GCMS after extraction with methyl *tert*-butylether.

a) Specific Evaluation

In addition, an examination for the below listed contaminants was performed.

Result:

Sample MP1 + MP2:

Diisopropylnaphthalene (DIPN)	[38640-62-9]	not quantifiable	<	0.05	mg/dm ²
Other solvent		not quantifiable	<	0.05	mg/dm ²
Benzophenone	[119-61-9]	not quantifiable	<	0.02	mg/dm ²
4-Methyl benzophenone	[134-84-9]	not quantifiable	<	0.02	mg/dm ²
Dimethyl phthalate	[131-11-3]	not quantifiable	<	0.05	mg/dm ²
Diethyl phthalate	[84-66-2]	not quantifiable	<	0.05	mg/dm ²
Dibutyl phthalate	[84-74-2]	not quantifiable	<	0.02	mg/dm ²
Diisobutyl phthalate	[84-69-5]	not quantifiable	<	0.02	mg/dm ²
Di(2-ethylhexyl) phthalate	[117-81-7]	not quantifiable	<	0.05	mg/dm ²
Di-n-octyl phthalate	[117-84-0]	not quantifiable	<	0.05	mg/dm ²
Benzylbutyl phthalate	[85-68-7]	not quantifiable	<	0.05	mg/dm ²
Diisononyl phthalate	[68515-48-0]	not quantifiable	<	0.15	mg/dm ²
Diisodecyl phthalate	[26761-40-0]	not quantifiable	<	0.20	mg/dm ²
Di-(2-ethylhexyl) adipate	[103-23-1]	not quantifiable	<	0.05	mg/dm ²
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate (TXIB)	[6846-50-0]	not quantifiable	<	0.02	mg/dm ²
Diisononyl-1,2-cyclohexane-dicarboxylate (DINCH)	[166412-78-8]	not quantifiable	<	0.15	mg/dm ²
Diethylene glycol dibenzoate	[120-55-8]	not quantifiable	<	0.002	mg/dm ²
Benzyl-2-naphthylether	[613-62-7]	not quantifiable	<	0.002	mg/dm ²

15.2. Mineral Oil (MOSH/MOAH) *

The determination was performed according to the DIN SPEC 5010:2018-05 after extraction with n-hexane.

The paraffinic, naphthenic mineral oil hydrocarbons (MOSH) and the aromatic mineral oil hydrocarbons (MOAH) were examined according to the publication „Messung von Mineralöl-Kohlenwasserstoffen in Lebensmitteln und Verpackungsmaterialien / Determination of mineral oil hydrocarbons in foods and packaging materials” (Bundesinstitut für Risikobewertung (BfR) / Kantonales Labor Zürich (KLZH); 4 May 2012) by means of on-line coupled HPLC-GC-FID.

Result:	MOSH			MOAH		
	$\geq C_{10} - \leq C_{16}$	$> C_{16} - \leq C_{20}$	$> C_{20} - \leq C_{35}$	$\geq C_{10} - \leq C_{16}$	$> C_{16} - \leq C_{35}$	
Sample MP1:	0.08	0.26	0.22	< 0.02	0.05	mg/dm ²
Sample MP2:	0.08	0.21	0.20	< 0.02	0.03	mg/dm ²

16. Determination of the Heavy Metals in Packagings *

The determination was performed after microwave disintegration by means of AAS or ICP-OES. It applies to those metals which are restricted according to the European Packaging Directive 94/62/EC as well as to the US American CONEG legislation.

Result:

Sample MP1:

Lead	(Pb):		5.4	mg/kg dry matter
Cadmium	(Cd):	not quantifiable	< 0.5	mg/kg dry matter
Mercury	(Hg):	not quantifiable	< 0.25	mg/kg dry matter
Chromium	(Cr):		3.8	mg/kg dry matter

Sample MP2:

Lead	(Pb):		5.7	mg/kg dry matter
Cadmium	(Cd):	not quantifiable	< 0.5	mg/kg dry matter
Mercury	(Hg):	not quantifiable	< 0.25	mg/kg dry matter
Chromium	(Cr):		3.9	mg/kg dry matter

Limit value 100 mg/kg (sum of Pb, Cd, Hg and Cr(VI)).

Comment:

Under the disintegration conditions the total content of chromium including chromium(VI) is detected.

17. Determination of Polybromated Diphenylethers (PBDE) and Polybromated Biphenyls (PBB)

The determination was performed in collaboration with ARGUK-Umweltlabor GmbH, Oberursel/ Germany by means of GC-ECD or GCMS in an acetone extract. The following compounds were considered:

Tetrabromo diphenylether (TeBDE)	Hexabromo biphenyl (HxBB)
Pentabromo diphenylether (Σ PeBDE – 85, 99, 100)	Octabromo biphenyl (OBB)
Hexabromo diphenylether (HxBDE)	Decabromo biphenyl (DBB)
Heptabromo diphenylether (HeBDE)	
Octabromo diphenylether (Σ OBDE – 196, 197, 203)	
Nonabromo diphenylether (NBDE)	
Decabromo diphenylether (DBDE)	

Limit of quantitation: PBDE 10 mg/kg ; PBB 1 mg/kg

Result:

Sample MP1 + MP2:

None of the above-listed compounds were quantifiable.

The accreditation applies to the methods marked with * in the test report (Register no. D-PL-14160-01-01).

End of report