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09.04.2021

Report No. 0001085290/10 AZ 407204  
Test item: Paper samples, white  
Identification: Easy Fun Greaseproof Paper (Fluorocarbon-Free)  
Condition at delivery: No claim  
Date of delivery: 25.03.2021  
Place of testing: Cologne, Nuremberg  
Test period: 30.03.2021 to 08.04.2021  
Test scope: Parameters selected by customer  
Test specification: Resolution AP (2002) 1 on Paper and board materials and articles intended to come into contact with foodstuffs" (Council of Europe)  
Test result: According to the kind and extent of tests performed the test item meets the requirements of the test specification.

tested by:

authorized by:

09.04.2021

X



Sachverständige(r)/Expert  
Signiert von: Mark Hofmann

09.04.2021

X



Sachverständige(r)/Expert  
Signiert von: Inga Mickley-Aust

Report No.: 0001085290/10 AZ 407204  
Date: 09.04.2021

Page 2 of 11

## Photo documentation

**Picture 1: Easy Fun Greaseproof Paper (Fluorocarbon-Free)**



Report No.: 0001085290/10 AZ 407204  
Date: 09.04.2021

## List of materials

Article	Article name
1	Easy Fun Greaseproof Paper (Fluorocarbon-Free)

Mat.No.	Article	Component	Material	Colour
001	1	Base material	paper	white

Report No.: 0001085290/10 AZ 407204  
Date: 09.04.2021

Page 4 of 11

## Results

### Sensory analysis

Sample composition	Mat. 001				
Sample No.	407204-001				
Unit	.				
<b>Organoleptic test</b>					
Contact medium	K/C				
Test conditions	24 h, 40°C				
Migration preparation	-				
Smell transfer	0				
Transfer of taste	0				

K/C cookie

If the evaluation is between 0 to 2.5 no sensory deviation is indicated and the sample fulfils the requirements of § 31 LFGB respectively article 3 of the regulation (EC) 1935/2004 (61. Mitteilung Bundesgesundheitsbl. - Gesundheitsforsch - Gesundheitsschutz 46 (2003) 363).

Evaluation scheme:

- 0 = no perceptible difference
- 1 = just perceptible difference (still difficult to define)
- 2 = slight difference
- 3 = marked difference
- 4 = strong difference

### Formaldehyde, paper

Sample composition	Mat. 001				
Sample No.	407204-008				
Unit	mg/dm <sup>2</sup>				
<b>Extraction preparation</b>	10,020g/250ml/ 22,6dm <sup>2</sup>				
Extraction temperature	C/K				
Formaldehyde [mg/kg food simulant]	<1,5				
Formaldehyde	<0,1				

C/K Cold water extract

Paper with food contact:

Limit acc. to

-BfR recommendation XXXVI "Paper and board for food contact" (Germany):

-"Resolution AP (2002) 1 on Paper and board materials and articles intended to come into contact with foodstuffs" (Council of Europe):

15 mg/kg food simulant

Sanitary Papers:

Limit acc to "Guidelines for Evaluating Sanitary Papers" (Bundesgesundhbl. 39 (1996) 123):

1 mg/dm<sup>2</sup>

Report No.: 0001085290/10 AZ 407204  
 Date: 09.04.2021

Page 5 of 11

**Heavy metals, paper/board**

Sample composition	Mat. 001				
Sample No.	407204-003				
Unit	mg/kg				
<b>Group heavy metals, paper</b>					
Extraction temperature	C/K				
Aluminium [mg/l]	0,05				
Lead	<0,005				
Lead [µg/l]	<5				
Lead [mg/dm <sup>2</sup> ]	<0,001				
Cadmium [µg/l]	<1				
Cadmium [mg/dm <sup>2</sup> ]	<0,001				
Chromium [mg/dm <sup>2</sup> ]	<0,002				
Mercury [mg/dm <sup>2</sup> ]	<0,001				
Mercury	<0,001				

C/K Cold water extract

Requirements according to the recommendation of the BfR part XXXVI:

No more than 10 µg/l lead and 5 µg/l cadmium must be detectable in the cold water extract of the finished product.

The migration of aluminium into foodstuffs must not exceed 1 mg/kg. If tested in cold water extract, a limit of 1 mg/l applies to aluminium.

Cold water extract of the finished product must contain no more than 0.004 mg chromium(III)/dm<sup>2</sup>, while chromium (VI) must not be detectable.

Requirements according to the recommendation of the BfR part XXXVI/1 reps. XXXVI/2:

No more than 10 µg/l lead and 5 µg/l cadmium must be detectable in the hot water extract of the finished product.

The migration of aluminium into foodstuffs must not exceed 1 mg/kg. If tested in hot water extract, a limit of 1 mg/l applies to aluminium.

Hot water extract of the finished product must contain no more than 0.004 mg chromium(III)/dm<sup>2</sup>, while chromium (VI) must not be detectable.

Requirements acc. to DGCCRF document Fiche MCDA n°4 (V02 - 01/01/2019) "Aptitude au contact alimentaire des matériaux organiques à base de fibres végétales destinés à entrer en contact avec des denrées alimentaires" (France)

Lead <= 0,01 mg/kg food simulant

Mercury <= 0,003 mg/kg food simulant

Limit acc. to Resolution AP (2002) 1 on Paper and board materials and articles intended to come into contact with foodstuffs (Council of Europe)

Cadmium 0,002 mg/dm<sup>2</sup> paper

Lead 0,003 mg/dm<sup>2</sup> paper

Mercury 0,002 mg/dm<sup>2</sup> paper

Report No.:  
Date:

0001085290/10 AZ 407204  
09.04.2021

Page 6 of 11

**Primary aromatic amines (specific analysis), migration**

Sample composition	Mat. 001			
Sample No.	407204-002			
Unit	mg/kg food simulant			
<b>Primary aromatic amines</b>				
Migration solution	H2O			
Conditions of migration	C/K			
Migration preparation	10,020g / 250ml / 22,6dm <sup>2</sup>			
2,4-Dimethylaniline	<0,002			
<b>4,4'-Diaminodiphenylmethane (4,4-MDA)</b>	<0,002			
4,4'-MCDA	<0,002			
Aniline	<0,002			
<b>Benzidine</b>	<0,002			
Benzoguanamine	<0,002			
m-Anisidine	<0,002			
m-Toluidine	<0,002			
<b>o-Aminoazotoluene</b>	<0,002			
<b>o-Anisidine</b>	<0,002			
o-Phenylenediamine	<0,002			
<b>o-Toluidine</b>	<0,002			
<b>p-Chloraniline</b>	<0,002			
<b>p-Cresidine</b>	<0,002			
p-Phenylenediamine	<0,002			
m-Phenylenediamine	<0,002			
p-Toluidine	<0,002			
1,5-Diaminonaphthalene	<0,002			
<b>2-Naphthylamine</b>	<0,002			
<b>2,4-Diaminoanisole / 4-Methoxy-m-phenyldiamine</b>	<0,002			
<b>2,4-Toluylendiamine</b>	<0,002			
<b>2,4,5-Trimethylaniline</b>	<0,002			
2,6-Dimethylaniline	<0,002			
2,6-Toluylendiamine	<0,002			
<b>3,3'-Dichlorobenzidine</b>	<0,002			
<b>3,3'-Dimethoxybenzidine</b>	<0,002			
<b>3,3'-Dimethylbenzidine</b>	<0,002			
<b>3,3-Dimethyl-4,4-diaminodiphenylmeth.</b>	<0,002			
<b>4-Aminoazobenzene</b>	<0,002			
<b>4-Aminobiphenyl</b>	<0,002			
<b>4-Chloro-o-toluidine</b>	<0,002			
<b>4,4'-Methylen-bis-(2-chloroaniline)</b>	<0,002			
<b>4,4'-Oxydianiline</b>	<0,002			
<b>4,4'-Thiodianiline</b>	<0,002			
<b>5-Nitro-o-toluidine</b>	<0,002			
3-Amino-4-methoxybenzanilide	<0,002			
3-Chloroaniline	<0,002			
2-Chloroaniline	<0,002			
4-Ethoxyaniline	<0,002			
Dimethyl-2-aminoterephthalate	<0,002			
2-Ethoxyaniline	<0,002			
4-Aminobenzamide	<0,002			
5-Chloro-2-methylaniline	<0,002			
3-Amino-4-methylbenzamide	<0,002			
4-Chloro-2,5-dimethoxyaniline	<0,002			
5-Chloro-2-anisidine	<0,002			
2-Nitroaniline	<0,005			

Report No.: 0001085290/10 AZ 407204  
 Date: 09.04.2021

Page 7 of 11

Sample composition	Mat. 001				
Sample No.	407204-002				
Unit	mg/kg food simulant				
2-Methoxy-4-nitroaniline	<0,005				
5-Amino-6-methyl benzimidazolone	<0,005				
1,3-Diiminoisoindolen	<0,005				
2,5-Dichloraniline	<0,01				
2-Chlor-4-nitroaniline	<0,005				
2,4,5-Trichloraniline	<0,01				
4-Chlor-3-methoxyaniline	<0,01				
2,4-Dinitroaniline	<0,005				
4-Aminotoluene-3-sulfonic acid	<0,005				
2-Amino-1-naphtalenesulfonic acid	<0,005				
2-Aminobiphenyl	<0,002				
4-Nitro-o-toluidine	<0,002				

C/K Cold water extract  
 H2O water

Requirement according to

- BfR recommendation XXXVI "Paper and board for food contact" (Germany)
- DGCCRF document Fiche MCDA n°4 (V02 - 01/01/2019) "Aptitude au contact alimentaire des matériaux organiques à base de fibres végétales destinés à entrer en contact avec des denrées alimentaires" (France)

A transfer of primary aromatic amines must not be detectable with an applied limit of 0,01 mg of the sum of primary aromatic amines per kg food stuff. In addition carcinogenic primary aromatic amines of the category 1A and 1B must not be detectable with an applied detection limit of 0,002 mg/kg of food stuff.

- "Regeling Verpakkingen en Gebruiksartikelen (Warenwet)" (Netherlands)
- "Resolution AP (2002) 1 on Paper and board materials and articles intended to come into contact with foodstuffs" (Council of Europe):

A transfer of primary aromatic amines must not be detectable with an applied limit of 0,01 mg of the sum of primary aromatic amines per kg food stuff.

Primary aromatic amines from REACH Annex XVII entry 43 Annex 8 are highlighted in grey.

If not further specified the 1st migrate is reported.

Report No.: 0001085290/10 AZ 407204  
 Date: 09.04.2021

Page 8 of 11

**Chlorophenols**

Sample composition	Mat. 001			
Sample No.	407204-004			
Unit	mg/kg			
<b>Chlorophenols</b>				
Pentachlorophenol	<0,15			
2,3,4-Trichlorophenol	<0,15			
2,3,5-Trichlorophenol	<0,15			
2,3,6-Trichlorophenol	<0,15			
2,4,5-Trichlorophenol	<0,15			
2,4,6-Trichlorophenol	<0,15			
3,4,5-Trichlorophenol	<0,15			
2,3,4,5-Tetrachlorophenol	<0,15			
2,3,4,6-Tetrachlorophenol	<0,15			
2,3,5,6-Tetrachlorophenol	<0,15			

According to "Resolution AP (2002) 1" and "Policy Statement Concerning Tissue Paper Kitchen Towels and Napkins" by the Council of Europe the finished product must not contain more than 0.15 mg/kg pentachlorophenol.

Evaluation of wooden products in accordance

Requirements acc. to DGCCRF document Fiche MCDA n°4 (V02 - 01/01/2019) "Aptitude au contact alimentaire des matériaux organiques à base de fibres

végétales destinés à entrer en contact avec des denrées alimentaires" (France)

Pentachlorophenol: <= no more than 0,1 mg/kg Paper

Requirements according Warenwetregeling verpakkingen en gebruikartikelen Hoofdstuk II on papers in contact with food (Netherlands):

Chlorophenols (sum) <= 0,1 mg/kg food simulant

\*for grammages of the sample up to 1500 g/m² the value expressed in mg/kg food simulant cannot be higher than the value expressed in mg/kg paper

**Diisopropylnaphthalene (DIPN)**

Sample composition	Mat. 001			
Sample No.	407204-005			
Unit	mg/kg			
<b>Diisopropylnaphthaline</b>	<1,0			

Limit value 30 mg/kg



Report No.: 0001085290/10 AZ 407204  
Date: 09.04.2021

Page 9 of 11

**Fastness of fluorescent whitened paper and board**

Sample composition	Mat. 001				
Sample No.	407204-006				
Unit	Stufe/Grade				
<b>Method</b>	A				
Water	5				
3% - acetic acid	5				
Alkaline salt solution	5				
Oil	5				

- A: long duration contact
- B: medium time contact
- C: short term contact
- D: hot contact

Requirement according to the recommendation of the BfR XXXVI "Paper and board for food contact": no transfer of optical brightener to foodstuffs, grade 5 must be reached

Requirements acc. to DGCCRF document Fiche MCDA n°4 (V02 - 01/01/2019) "Aptitude au contact alimentaire des matériaux organiques à base de fibres végétales destinés à entrer en contact avec des denrées alimentaires" (France)

Optical brighteners must not migrate to the foodstuff, grade 5 must be reached

**Transfer of antimicrobial constituents**

Sample composition	Mat. 001				
Sample No.	407204-007				
Unit	mm				
<b>Antimicrobial transfer</b>					
Aspergillus niger, DSM 1957	.				
Growth	++				
Growth inhibition zone	0				
Bacillus subtilis, ATCC 6633/DSMZ 618	.				
Growth	++				
Growth inhibition zone	0				

- = no growth
- + = growth
- ++ = strong growth

Requirement according to

- BfR recommendation XXXVI "Paper and board for food contact" (Germany):

-DGCCRF Dokument "Aptitude au contact alimentaire des matériaux organiques à base de fibres végétales destinés à entrer en contact avec des denrées alimentaires" (France):

- "Resolution AP (2002) 1 on Paper and board materials and articles intended to come into contact with foodstuffs" (Council of Europe):

The finished paper or paperboard must have no preserving effect on the foodstuffs with which they come into contact (Determination of the transfer of antimicrobial constituents with EN 1104. Samples that do not show an inhibition zone >2 mm, do not release antimicrobial constituents.).

## Summary of methods

<b>Sensory analysis</b>	<b>Standard:</b> DIN 10955	<b>Issue date:</b> 01.06.04
Method description: Sensory analysis -Testing of container materials and containers for food products (Commodities), test according to: clause 11.6.3 letter c)		
<b>Formaldehyde, paper</b>	<b>Standard:</b> DIN EN 1541	<b>Issue date:</b> 01.07.01
Method description: Paper and board intended to come into contact with foodstuffs - Determination of formaldehyde in an aqueous extract. Cold water extract according to DIN EN 645, hot water extract according to DIN EN 647		
<b>Heavy metals, paper/board</b>	<b>Standard:</b> MS-0022823*	<b>Issue date:</b> 10.03.20
Method description: Cold water extraction according to DIN EN 645, hot water extract according to DIN EN 647, determination by ICP OES or ICP MS		
Notes: * in-house working instruction		
<b>Primary aromatic amines (specific analysis), migration</b>	<b>Standard:</b> MS-0029972*	<b>Issue date:</b> 20.11.17
Method description: In-house method - Determination of selected primary aromatic amines in paper/board after migration under specified conditions, quantification by HPLC-MS/MS		
Notes: 4,4'-MCDA = 4,4'-Methylenebis-(3-chloro-2,6-diethylaniline).		
* in-house working instruction		
<b>Chlorophenols</b>	<b>Standard:</b>	<b>Issue date:</b>
Method description: In-house method - Determination of chlorophenols in products with food contact after alkaline extraction and derivatisation. Quantification by GC-MS		
<b>Diisopropylnaphthalene (DIPN)</b>	<b>Standard:</b> DIN EN 14719	<b>Issue date:</b> 01.10.05
Method description: Fibre, paper and board - Determination of the diisopropylnaphthalene (DIPN) content by solvent extraction		
Notes: The recommendation of the BfR (German Institute for Risk Assessment) XXXVI. "Paper and board for food contact" serves as basis for the evaluation of the test results. Paper and board may contain Diisopropylnaphthalene (DIPN) as a consequence of the use of recycled fibres as raw material. DIPN is used as a solvent in carbonless copy paper. Such paper may be contained in recovered paper. A transfer of DIPN to foodstuffs may take place by direct contact or via the gas phase. The DIPN content in paper and board must be as low as technologically possible in order to minimise its transfer to foodstuffs.		
<b>Fastness of fluorescent whitened paper and board</b>	<b>Standard:</b> DIN EN 648	<b>Issue date:</b> 01.02.19
Method description: Paper and board intended to come into contact with foodstuffs - Determination of the fastness of fluorescent whitened paper and board		
<b>Transfer of antimicrobial constituents</b>	<b>Standard:</b> DIN EN 1104	<b>Issue date:</b> 01.01.19
Method description: Paper and board intended to come into contact with foodstuffs - Determination of transfer of antimicrobial constituents		

Report No.: 0001085290/10 AZ 407204  
Date: 09.04.2021

## Version directory

Version No.	Report No.	List of changes	Datum
1	0001085290/10 AZ 407204	First edition	09.04.2021

Only the version last shown in the version directory is valid. The previous version(s) shown in the table lose their validity immediately and must be returned or destroyed by the customer.

----End of report----