SGS INSTITUT FRESENIUS GmbH• Postfach 1261 • 65220 Taunusstein

Gala Concept B.V.
Mr. Allard Lith
Hanzeweg 36
NL-1335 SX Almere

Zamien Sarkardeh / sd
Project Manager Hardlines
Tel.: +49 6128 744-385, Fax: +49 6128 744-534
Zamien.Sarkardeh@sgs.com
Consumer an Retail
Nonfood

Taunusstein, 24/05/2017

Test-report no. 3376739
Test-report version < 1 >

Original Sample ID	Sample Description	Sample Receipt Date
170417047	Stone Paper Material: HDPE SP17-008667.001	19/04/2017

3376739

General Information

SGS-Client´s ID	:	10033166
SGS-Customer-Order	:	4133292
Ordering date	:	13/04/2017
Testing period	:	24/04/2017 – 19/05/2017
Order No.	:	SP17-008667
Testing scope	:	Test according to client's requirements

Assessment

Overall assessment	**pass**
The sample meets the requirements of LFGB and Regulation (EC) No. 1935/2004 in the tested items.	

SGS INSTITUT FRESENIUS GmbH

i. A. Claas Isemer
(Project Manager)

i. A. Eleonore Niedenthal
(Project Manager)

SGS INSTITUT FRESENIUS GmbH | Im Maisel 14 D-65232 Taunusstein **t** +49 6128 744 - 0 **f** +49 6128 744 - 130 www.institut-fresenius.sgsgroup.de

Summary of results

Test	Result
Sensory test	pass
Specific migration of 1-octene (Ref. No: 22660, CAS No: 111-66-0)	pass
Specific migration von 1-hexene (Ref. No: 18820, CAS No: 592-41-6)	pass
Specific migration of plasticizers	pass
Catalyst residues (PP)	pass
PAH	pass
Bisphenol A	pass
Peroxides	pass

Note:

Conclusions on pass/fail are based on the test result from the actual sampling of the received sample(s).

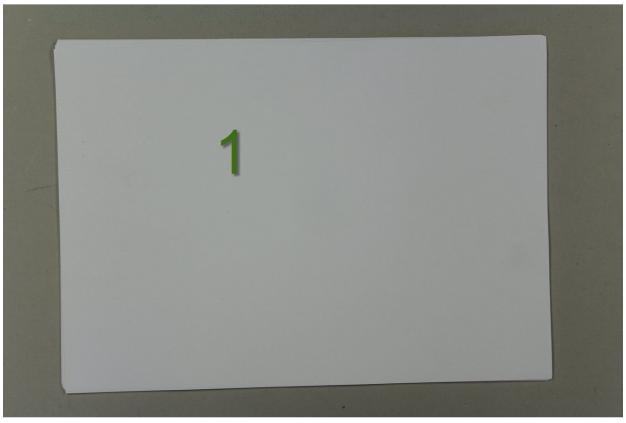
Conclusions are based on the relevant requirements; measurement uncertainties are not taken into account. Only results above the relevant detection limit are taken into account for the calculation of sums.

Test was conducted on composite of random parts of the item as per client's request and the test result is the overall result.

The composite sampling method is based on the client's special request and could be a modification from the testing standard.

For 2-composite mix with results exceeding one half of the relevant requirements or 3-composite mix with results exceeding one third of the relevant requirements, the composite sample may have the possibility of one or more components that can lead to a failure result, it is recommended to test on individual basis.

Photo documentation



List of sample parts

Comp. no	Component-ID	Sample-Description			Original Sample ID
1	-	Stone paper			170417047

Analytical results

Sensory test

Test Method
DIN 10955:2004-06

simulant	water
duration	10 days
temperature	40 +/- 2°C
approach	6 dm²/L

Sample(s) /Subsample(s)	Unit	Result 1
		1st contact
Median Odour [1]		1.0
Median Taste [1]		1.5
Conclusion		Pass

Note:

Key:	0	=	no change
	1	=	very slight off odour / off-taste
	2	=	slight off- odour / off-taste
	3	=	distinct off- odour / off-taste
	4	=	strong off-odour/ off-taste

Requirement: With an assessment from 0 to 2.5 there is no, respectively a tolerable organoleptic impact existent in terms of Regulation (EC) No 1935/2004.

[1]Median rounded at 0.5 grades

Specific migration of 1-octene (Ref. No: 22660, CAS No: 111-66-0)

Test Method
SOP M1030, SPME HS-GC-MS , after migration DIN EN 13130-1

simulant	95% ethanol
duration	10 days
temperature	40 +/- 2°C
approach	6 dm²/L

Sample(s) /Subsample(s)	Unit	Result 1
		1st contact
1-octene (111-66-0)	mg/kg	< 0.10
Conclusion		Pass

Note:

Requirement: max. 15 mg/kg food simulant (Regulation (EU) No 10/2011)

Specific migration von 1-hexene (Ref. No: 18820, CAS No: 592-41-6)

Test Method
SOP M1030, SPME HS-GC-MS , after migration DIN EN 13130-1

simulant	95% ethanol
duration	10 days
temperature	40 +/- 2°C
approach	6 dm²/L

Sample(s) /Subsample(s)	Unit	**Result 1**
		1st contact
1-hexene (592-41-6)	mg/kg	< 0.10
Conclusion		Pass

Note:

Requirement: max. 3 mg/kg food simulant (Regulation (EU) No 10/2011)

Specific migration of plasticizers

Test Method
Migration: DIN 13130-1; measurement: GC-MS

simulant	95% ethanol
duration	10 days
temperature	40 +/- 2°C
approach	6 dm²/L

Subsample(s)	Unit	**Result 1** 1st Contact
Triethyl citrate (TEC) (77-93-0)	mg/kg	< 0.05
Diallylphthalate (DALLP) (131-17-9)	mg/kg	< 0.01
Dibutylphthalate (DBP) (84-74-2)	mg/kg	< 0.05
Dibutylsebacate (DBS) (109-43-3)	mg/kg	< 0.05
Tributylacetylcitrate (TBAC) (77-90-7)	mg/kg	< 0.05
Di-(2-ethylhexyl)adipate (DEHA) (103-23-1)	mg/kg	< 0.05
Bis-(2-ethylhexyl)phthalate (DEHP) (117-81-7)	mg/kg	< 0.05
Benzylbutylphthalate (BBP) (85-68-7)	mg/kg	< 0.05
Di-(2-ethylhexyl)terephthalate (DEHT) (6422-86-2)	mg/kg	< 0.05
Di-iso-nonylcyclohexyldicarboxylate (DINCH) (166412-78-8)	mg/kg	< 0.05
Phthalic acid, di-ester with primary saturated C8-C11-dentrited alcohols, above 60 % C9 (DINP) (28553-12-0)	mg/kg	< 0.05
Phthalic acid, di-ester with primary saturated C9-C11-dentrited alcohols, above 90 % C10 (DIDP) (26761-40-0)	mg/kg	< 0.05
Conclusion		pass

Note:

Requirement:	Regulation (EU) No 10/2011:	TEC:	max. 60 mg/kg food simulant[a]
		DALLP:	< 0.01 mg/kg food simulant
		DBP:	max. 0.3 mg/kg food simulant
		DBS:	max. 60 mg/kg food simulant[a]
		TBAC:	max. 60 mg/kg food simulant[a]
		DEHA:	max. 18 mg/kg food simulant
		DEHP:	max. 1.5 mg/kg food simulant
		BBP:	max. 30 mg/kg food simulant
		DEHT:	max. 60 mg/kg food simulant[a]
		DINCH:	max. 60 mg/kg food simulant[a]
		DINP + DIDP:	Sum: max. 9 mg/kg food simulant

[a] Sum of all plasticizers

Catalyst residues (PP)

Test Method
Based on EN 1122:2002 , analysis was conducted with ICP-OES after digestion

Sample(s) /Subsample(s)	Unit	**Result 1**
chromium (Cr)	mg/kg	1.5
hafnium (Hf)	mg/kg	< 5.0
vanadium (V)	mg/kg	< 5.0
zirconium (Zr)	mg/kg	< 5.0
Conclusion		Pass

Note:

Requirement:	BfR Recommendation VII:	Chromium	max. 10 mg/kg
		Vanadium	max. 20 mg/kg
		Hafnium	max. 100 mg/kg
		Zirconium	max. 100 mg/kg

PAH

Test Method
AfPS GS 2014:01 PAK , with use of GC-MSD

Sample(s) /Subsample(s)	Unit	Result 1
Benzo[a]anthracene (56-55-3) [1]	mg/kg	< 0.2
Chrysene (218-01-9) [1]	mg/kg	< 0.2
Benzo[e]pyrene (192-97-2) [1]	mg/kg	< 0.2
Benzo[b]fluoranthene (205-99-2) [1]	mg/kg	< 0.2
Benzo[k]fluoranthene (207-08-9) [1]	mg/kg	< 0.2
Benzo[j]fluoranthene (205-82-3) [1]	mg/kg	< 0.2
Benzo[a]pyrene (50-32-8) [1]	mg/kg	< 0.2
Dibenzo[ah]anthracene (53-70-3) [1]	mg/kg	< 0.2
Conclusion EU-PAHs		Pass
Acenaphthylene (208-96-8)	mg/kg	< 0.2
Acenaphthene (83-32-9)	mg/kg	< 0.2
Fluorene (86-73-7)	mg/kg	< 0.2
Phenanthrene (85-01-8)	mg/kg	< 0.2
Anthracene (120-12-7)	mg/kg	< 0.2
Fluoranthene (206-44-0)	mg/kg	< 0.2
Pyrene (129-00-0)	mg/kg	< 0.2
Naphthalene (91-20-3)	mg/kg	< 0.2
Benzo[ghi]perylene (191-24-2)	mg/kg	< 0.2
Indeno[1,2,3-cd]pyrene (193-39-5)	mg/kg	< 0.2
Total 18 PAH [2]	mg/kg	-
Conclusion (per single substance)		Pass

Note:

Requirement: not listed in Regulation (EU) No 10/2011 (<0.2 mg/kg)

[1]PAH according to the Commission Regulation (EU) No 1272/2013 amending Annex XVII to Regulation (EC) No 1907/2006 effective from December 27, 2015

[2]For the summation only results above the reporting limit are taken into account.

Bisphenol A

Test Method
Inhouse method LC-MS/MS

Sample(s) /Subsample(s)	Unit	Result 1
Bisphenol A (80-05-7)	mg/kg	< 0.1
Conclusion		Pass

Note:

Requirement: In France a warning has to be given on products for food contact containing Bisphenol A (Lois n° 2012-1442). At the moment an indicative threshold of 0.1 mg/kg is discussed.

Peroxides

Test Method
Franck R.: Kunststoffe im Lebensmittelverkehr, part B II V and VI

Sample(s) /Subsample(s)	Unit	**Result** **1**
peroxides		not detectable
Conclusion		Pass

Note:

Requirement: not detectable (BfR Recommendation V resp. VI)

*** End of test report ***