TÜVRheinland®
Precisely Right.

Test Report No.: Q00262647a1 002

Client: **EVOLIS**
14 avenue de la fontaine ZI Angers-Beaucouzé 49070 BEAUCOUZE FRANCE

Test item(s): Cards

Identification/ Model No(s): PRINTING BLACK CARD WITH RIBBON MONOCHROME WHITE
ITEM NO.: C8001 / MONOCHROME WHITE

Sample Receiving date: 2013-08-29

Delivery condition: *Apparent good, Samples tested as received*

Test specification:	**Test result:**
Selected tests for the suitability for contact with foodstuffs complied with the following regulations: - Regulation (EC) no 1935/2004 on materials and articles intended to come into contact with food.	PASS

Other Information:

Testing period: 2013-09-02 – 2013-09-19

Information provided by client
Export to: France

This report Q00262647a1 002 supersedes report Q00262647a 001f

For and on behalf of
TÜV Rheinland (Hong Kong) Ltd.

2013-10-02 Amy Chong / Assistant Project Manager

Date *Name/Position*

Material List:

Item: PRINTING BLACK CARD WITH RIBBON MONOCHROME WHITE
ITEM NO.: C8001 / MONOCHROME WHITE

Material No.	Material	Color	Location
1	PVC with PET ribbon	Black / white	Card

Test Results

1. Sensorial Examination

It is examined to the extent of food simulant being used, which comes into contact with the product, undergoes detectable changes in taste and smell. For this purpose, the food simulant was stored in the product under the below mentioned time and temperature. Afterwards, the food simulant was examined by appropriate number of tasters with regard to any divergence in smell and taste. Another test sample, which was used as a reference, was treated by the same way except that it had no contact with the product to be tested.
Before testing, the product had been cleaned according to the product's instruction manual or in the absence of such manual, with hot water (60°C).
The test was carried out on the basis of DIN 10955:2004.
Evaluation scheme for the transfer of taste and smell:

0 = no discernible deviation
1 = barely discernible deviation
2 = weak deviation
3 = clear deviation
4 = strong deviation

Limit: 3 (failed)

The following simulation solvents and test conditions were stipulated:

food simulant	test duration/temperature
Water	10 days at 40°C

Test No:	1	Limit
Material No.:	1	
Parameter	Result (Average)	
transfer of smell into foodstuffs	0	<3
transfer of taste into foodstuffs	0	<3

The submitted product is inconspicuous with regard to the transfer of smell and taste to the food simulant.

2. Global Migration

The migratory behaviour is examined in accordance with Directive 82/711/EEC and Council Directive 85/572/EEC and its corresponding regulations. Deviating to the regulations the following tests were performed as orientating single tests.

Limit: Commission Regulation (EU) No 10/2011

The following simulating solvents and test conditions were stipulated:

food simulant	test duration/temperature
3% acetic acid	10 days at 40°C
95% ethanol	10 days at 40°C
Isooctane	2 days at 20°C

Test No.:	1		Limit
Material No.:	1		
Parameter	Unit	Result	
3% acetic acid	mg/dm²	<2.0	10
95% ethanol	mg/dm²	2.0	10
Isooctane	mg/dm²	<2.0	10

Abbreviation: mg/dm^2 = milligram per square decimetre
< = less than

Remark:
*1 Ratio of food contact surface area to volume used to establish the compliance of the material is 1dm²:167ml.

*2 The examined item meets the requirement.

3. Migration of metals, Metal-release from Plastic

The testing of migration was performed with reference to Directive 82/711/EEC and Council Directive 85/572/EEC and its corresponding regulations. The determination of the amounts of metal that were released is done via ICP-OES.

The following simulation solvents and test conditions were stipulated:

food simulant	test duration/temperature
3% acetic acid	10 days at 40°C

Limit: Commission Regulation (EU) No 10/2011

Test No.:		1	Limit
Material No.:		1	
Parameter	Unit	Result	
Barium	mg/kg	<0.1	1
Cobalt	mg/kg	<0.01	0.05
Copper	mg/kg	<0.1	5
Iron	mg/kg	<1	48
Lithium	mg/kg	<0.1	0.6
Manganese	mg/kg	<0.1	0.6
Zinc	mg/kg	<1	25

Abbreviation: mg/kg = milligram per kilogram
< = less than

The examined item meets the requirement.

4. Migration of Antimony

Test method: The migratory behaviour is examined with reference to Directive 82/711/EEC and Council Directive 85/572/EEC and its corresponding regulations. Presence of Antimony is detected by means of ICP-OES.

The Antimony of a product was tested under the following conditions for migration:

food simulant	test duration/temperature
3% acetic acid	10 days at 40°C

Limit: Commission Regulation (EU) No 10/2011

Test No.:		1	Limit
Material No.:		1	
Parameter	Unit	Result	
Antimony	mg/kg	<0.01	0.04

Abbreviation: mg/kg = milligram per kilogram
< = Less than

The examined item meets the requirement.

5. Migration of Terephthalic acid

Test method: The migratory behaviour is examined with reference to Directive 82/711/EEC and Council Directive 85/572/EEC and its corresponding regulations. Presence of Terephthalic acid is detected by means of LC-MS/MS.

The Terephthalic acid of a product was tested under the following conditions for migration:

food simulant	test duration/temperature
3% Acetic acid	10 days at 40°C

Limit: Commission Regulation (EU) No 10/2011

Test No.:	1		Limit
Material No.:	1		
Parameter	Unit	Result	
Terephthalic acid	mg/kg	<1.0	7.5

Abbreviation: mg/kg = milligram per kilogram
< = Less than

The examined item meets the requirement.

6. Migration of Vinyl Chloride

Test method: The migratory behaviour is examined with reference to Directive 82/711/EEC and Council Directive 85/572/EEC and its corresponding regulations. Presence of Vinyl Chloride is detected by means of Headspace GCMS.

The Vinyl Chloride of a product was tested under the following conditions for migration:

food simulant	test duration/temperature
3% acetic acid	10 days at 40°C

Limit: Commission Regulation (EU) No 10/2011

Test No.:	1		Limit
Material No.:	1		
Parameter	Unit	Result	
Vinyl Chloride	mg/kg	<0.01	n.d.

Abbreviation: n.d. = Not Detected
mg/kg = milligram per kilogram
< = Less than

Limit of detection is 0.01 mg/kg

The examined item meets the requirement.

7. Vinyl Chloride Monomer

Test method : Ref. to 64 LFGB B 80.32-1(EG): 1981, organic solvent extraction, analysed by HS-GCMS

Limit: Commission Regulation (EU) No 10/2011

	Test No.:	1		Limit
	Material No.:	1		
Parameter	Unit	RL	Result	
Vinyl cholride monomer	mg/kg	0.1	n.d.	1

Abbreviation: n.d. = Not Detected (<Reporting Limit)
RL = Reporting Limit
mg/kg = milligram per kilogram

The examined item meets the requirement.

8. Colourfastness

Test method: Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food, Appendix III

Limit: Resolution AP (89) 1 on the use of colourants in plastic material coming into contact with food stuffs.

Test No.:	1
Material No:	1
Parameter – Colourfastness to	Difference between blank and filter paper contacted with sample
Distilled water	No
3% acetic acid	No
50% ethanol	No
Oil	No

Requirement: According to Resolution AP (89) 1, no transfer of colorants to foodstuffs is permitted during proper use of the commodity.

The examined item meets the requirement.

9. Screening of Plasticizer

Test method: Organic solvent extraction, Determination by GC-MS
Screening list of plasticizers acc. to table 1

Limit: Commission Regulation (EU) No 10/2011

Test No.:	1				
Material No.:	1				
Parameter	**CAS No.**	**Unit**	**RL**	**Result**	**Limit**
Benzylbutyl phthalate (BBP)	85-68-7	%	0.025	n.d.	0.1
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.025	n.d.	0.1
Dibutyl phthalate (DBP)	84-74-2	%	0.025	n.d.	0.05
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.025	n.d.	0.1
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.025	n.d.	0.1

Abbreviations: n.d. = Not detected (<Reporting Limit)
RL = Reporting Limit
% = Percentage

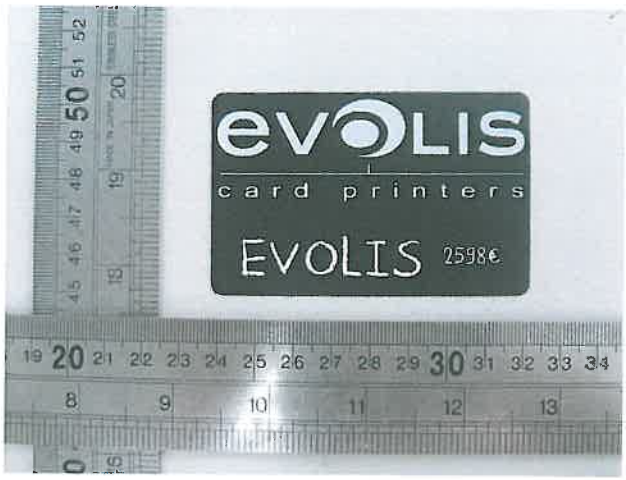
Remark:

*1 Plasticizers not listed in annex I of Regulation (EU) No 10/2011 have not been detected.

*2 The examined item meets the requirement.

Table 1: Screening List of Plasticizer	
Plasticizer Name	**CAS No.**
Benzylbutyl phthalate (BBP)	85-68-7
Diethylhexyl phthalate (DEHP)	117-81-7
Dibutyl phthalate (DBP)	84-74-2
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1
Di-n-octylphthalat, DNOP	117-84-0
Dimethylphthalat, DMP	131-11-3
Diethylphthalat, DEP	84-66-2
Butyl-i-butylphthalat	17851-53-5
Trimethylpentandiolisobutyrat, TXIB	6846-50-0
Diisononyladipat, DINA	33703-08-1
Acetyltributylcitrat, ATBC	77-90-7
Diethylhexyladipat, DEHA	103-23-1
Hexamoll®	166412-78-8
Mesamoll®	/
Triphenylphosphat	115-86-6
Tri-o-kresylphosphat	78-30-8
Tri-m-kresylphosphat	563-04-2
Tri-p-kresylphosphat	78-32-0
Butylbenzoat	136-60-7
Di(propylen glycol) dibenzoat, DPGDB	27138-31-4
Di(ethylen glycol) dibenzoat, DEGDB	120-55-8
LG FLEX EBN	610787-77-4
LG FLEX BET	610787-76-3
Tri(ethylhexyl)trimellitat, TOTM	3319-31-1
2-Ethylhexyldiphenylphosphat	1241-94-7
Di-iso-heptylphthalat, DIHeP	90937-19-2, 71888-89-6
Diisooctylphthalat, DIOP	27554-26-3
Diisobutylphthalat, DIBP	84-69-5
Di-n-pentylphthalat, DnPP	131-18-0
Diisopentylphthalat DiPP	605-50-5
Pentyl-iso-pentylphthalat	84777-06-0
Bis-(2-methoxyethyl)phthalat	117-82-8
Diethylhexylterephthalat, DEHT	6422-86-2
Di-(2-butoxyethyl)phthalat	117-83-9
Diallylphthalat	131-17-9
Dicyclohexylphthalat, DCP	84-61-7
Dimethylglycolphthalat, BMEP	117-82-8
Bis-(3,5,5-trimethylhexyl)phthalat	14103-61-8
Di-n-butylmaleat, DBM	1190-39-2, 105-76-0
Di-(2-ethylhexyl)maleat	142-16-5
Butylstearat	123-95-5
Dimethyladipat	627-93-0
Dibutyladipat	105-99-7
Diisodecyladipat	27178-16-1, 27193-86-8
Dicapryladipat	108-63-4
Di(2-(2-butoxyethoxy)ethyl)adipat	141-17-3
Bis(2-butoxyethyl)adipat	141-18-4
Stearylstearat	2778-96-3
Di-n-propylphthalat	131-16-8
Di-n-hexylphthalat, DNHP	84-75-3
Di-n-heptylphthalat	3648-21-3
Di-n-nonylphthalat, DnNP	84-76-4
Di-n-decylphthalat	84-77-5
Di-n-undecylphthalat	/
Diisoundecylphthalat, DIUP	96507-86-7
Di(2-propylheptyl)phthalat, DPHP	53306-54-0

Sample Photos:



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