TEST REPORT

CONCLUSION:

Total Lead Content in Paints and Surface Coatings [Consumer Product Safety Improvement Act of 2008 Section 101]	PASS
Total Lead Content in Substrates [Consumer Product Safety Improvement Act of 2008 Section 101]	PASS
Total Cadmium Content in Paints and Surface Coatings [Client Specification]	PASS
Total Tin Content in Substrates [Client Specification]	PASS
Total Bisphenol A Content [Various U.S. States Law with Client Specification]	PASS
Total Phthalates Content [Reference to Point 51, 52 of The Annex XVII of The Regulation (EC) No. 1907/2006 (REACH) and Further Amendment with Client Specification]	PASS
Total Cadmium Content in Substrate [Point 23 of the Annex XVII of the Regulation (EC) No. 1907/2006 (REACH) and further amendment]	PASS

Note: The results relate only to the items tested.

For and on behalf of：
UL VS Shanghai Limited Shenzhen Branch

Stephen Chan
Operation Manager

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TEST REPORT

TEST RESULTS

1. CHEMICAL TESTS:

Tested Sample ID	Product Description / Sample Group Desc.
001	Black coating (bar code on card)
002	Grey coating (cover on protective film of personal Identification number of card)
003	Black/ grey coatings (bar code, cover on personal Identification number of card)
004	White plastic with transparent plastic film and inaccessible coating (card)
005	Transparent plastic label (protective film on personal Identification number of card)

1.1 Total Bisphenol A Content [Various U.S. States Law with Client Specification]

Test Method: In-house method

Analyte	Requirement (Max.)	Reporting Limit	Sample, mg/kg
			001+002*
Bisphenol A	1	1	<1
Rating			PASS
Remark: -All concentrations expressed in milligrams per kilogram of Tested Parts -*Result(s) of Bisphenol A was / were further verified by wipe test method as per client's specification. -Method for determination of bisphenol A is determined by LC-MS-MS -The test results only apply to the items tested.			

1.2 Total Lead Content in Substrates [Consumer Product Safety Improvement Act of 2008 Section 101]

Test Method: CPSC-CH-E1001-08.3 (Metal Substrates) / CPSC-CH-E1002-08.3 Section IA & IIA (Non-Metal Substrates)

Elements	Requirement (Max.)	Reporting Limit	Sample, mg/kg
			004+005
Lead (Pb)	100	10	<10
Rating			PASS
Remark: -All concentrations expressed in milligrams per kilogram of Tested Parts -"<" means less than -Method for determination of Lead (Pb) is determined by Inductively Coupled Plasma Spectroscopy. -The test results only apply to the items tested.			

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TEST REPORT

TEST RESULTS

1.3 Total Cadmium Content in Substrate [Point 23 of the Annex XVII of the Regulation (EC) No. 1907/2006 (REACH) and further amendment]
Test Method: CPSC-CH-E1001-08.3 (Metal Substrates) / CPSC-CH-E1002-08.3 Section IA & IIA (Non-Metal Substrates)

Elements	**Requirement (Max.)**	**Reporting Limit**	**Sample, mg/kg**
			004+005
Cadmium(Cd)	100	10	<10
Rating			PASS

Remark:
-All concentrations expressed in milligrams per kilogram of Tested Parts
-"<" means less than
-Method for determination of Cadmium (Cd) is determined by Inductively Coupled Plasma Spectroscopy.
-The test results only apply to the items tested.

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TEST REPORT

TEST RESULTS

1.4 Total Tin Content in Substrates [Client Specification]

Test Method: CPSC-CH-E1001-08.3 (Metal Substrates) / CPSC-CH-E1002-08.3 Section IA & IIA (Non-Metal Substrates)

Elements	**Requirement (Max.)**	**Reporting Limit**	**Sample, mg/kg**
			004+005
Tin (Sn)	1000*	50	620.5
Rating			REPORT AS IS

Remark:
-All concentrations expressed in milligrams per kilogram of Tested Parts
-"<" means less than
-Method for determination of Tin (Sn) is determined by Inductively Coupled Plasma Spectroscopy.
*- Screening Test. A specific Organotin Compounds test should be proceeded if tin content exceeded 1000 mg/kg
-The test results only apply to the items tested.

Determination of Organotin Compounds [Client's Specification]

Test Method : In-house method

Analyte	**Requirement (Max.)**	**Reporting Limit**	**Sample, mg/kg**	
			004	**005**
Tributyltin (TBT)	1	0.1	<0.1	<0.1
Triphenyltin (TPHT)	1	0.1	<0.1	<0.1
Dibutyltin (DBT)	1	0.1	<0.1	<0.1
Dioctyltin (DOT)	1	0.1	<0.1	<0.1
Monobutyltin (MBT)	1	0.1	<0.1	<0.1
Monoctyltin (MOT)	1	0.1	<0.1	<0.1
Tetrabutyltin (TeBT)	1	0.1	<0.1	<0.1
Tricyclohexyltin (TcHT)	1	0.1	<0.1	<0.1
Rating			PASS	PASS

Remark:
-All concentrations expressed in milligrams per kilogram of Tested Parts
-"<" means less than
-Method for determination of Organotin are determined by GC-MSD
-The test results only apply to the items tested.

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TEST REPORT

TEST RESULTS

1.5 Total Lead Content in Paints and Surface Coatings [Consumer Product Safety Improvement Act of 2008 Section 101]

Test Method: CPSC-CH-E1003-09.1 (Paints and Surface Coatings)

Elements	Requirement (Max.)	Reporting Limit	Sample, mg/kg
			003
Lead (Pb)	90	10	<10
Rating			PASS

Remark:
-All concentrations expressed in milligrams per kilogram of Tested Parts
-"<" means less than
-Method for determination of Lead (Pb) is determined by Inductively Coupled Plasma Spectroscopy.
-The test results only apply to the items tested.

1.6 Total Cadmium Content in Paints and Surface Coatings [Client Specification]

Test Method: CPSC-CH-E1003-09.1 (Paints and Surface Coatings)

Elements	Requirement (Max.)	Reporting Limit	Sample, mg/kg
			003
Cadmium(Cd)	90	10	<10
Rating			PASS

Remark:
-All concentrations expressed in milligrams per kilogram of Tested Parts
-"<" means less than
-Method for determination of Cadmium (Cd) is determined by Inductively Coupled Plasma Spectroscopy.
-The test results only apply to the items tested.

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TEST REPORT

TEST RESULTS

1.7 Total Phthalates Content [Reference to Point 51, 52 of The Annex XVII of The Regulation (EC) No. 1907/2006 (REACH) and Further Amendment with Client Specification]

Test Method: CPSC-CH-C1001-09.4

Analyte	CAS No.	Requirement (Max.)	Reporting Limit	Sample, %	
				003	004+005
Dibutyl Phthalate (DBP)	84-74-2	0.1	0.005	<0.005	<0.005
Benzyl Butyl Phthalate (BBP)	85-68-7	0.1	0.005	<0.005	<0.005
Diethylhexyl Phthalate (DEHP)	117-81-7	0.1	0.005	<0.005	<0.005
Diisononyl Phthalate (DINP)	28553-12-0/ 68515-49-1	0.1	0.005	<0.005	<0.005
Di-n-octyl Phthalate (DNOP)	117-84-0	0.1	0.005	<0.005	<0.005
Diisodecyl Phthalate (DIDP)	26761-40-0/ 68515-48-0	0.1	0.005	<0.005	<0.005
Di-isobutyl phthalate (DiBP)	84-69-5	0.1	0.005	<0.005	<0.005
Bis(2-metoxyethil) phthalate (BMEP)	117- 82-8	0.1	0.005	<0.005	<0.005
Di-n-pentylphthalate (DnPP)	131-18-0	0.1	0.005	<0.005	<0.005
Di- hexylphthalate (DnHP)	84-75-3	0.1	0.005	<0.005	<0.005
1,2- benzendicarboxylic acid, di-C7-C11 Branched and linear alkyl ester, (DHNUP)	68515-42-4	0.1	0.005	<0.005	<0.005
1,2- benzendicarboxylic acid, di-C6-C8 branched alkyl ester (DIHP)	71888-89-6	0.1	0.005	<0.005	<0.005
Di-isopentylphthalate (DiPP)	605-50-5	0.1	0.005	<0.005	<0.005
N-pentyl- isopentylphthalate (PiPP)	776297-69-9	0.1	0.005	<0.005	<0.005
Di-hexylphthalate, branched and linear (DHxP)	68515-50-4	0.1	0.005	<0.005	<0.005
Rating				PASS	PASS

Remark:
-All concentrations expressed in percentage (%)
-"<" means less than
-Method for determination of Phthalates are determined by Gas Chromatography Mass Selective Detector (GC-MSD)
-The test results only apply to the items tested.

********* THE END *********

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PVC-SFS - Material Safety Data Sheet SEE IMPORTANT

NOTICE ON BOTTOM OF PAGE 2

I - Product Identification	HMIS Rating
Manufacturer's Name and Address Guangzhou Zhanfeng Smart Card Technology Co.,Ltd	Health ☐ Flammability ☐ Reactivity ☐
Identity **Polyvinyl Chloride (Soft PVC)**	Personal Protection ☐

II – Hazardous Ingredients

Hazardous Components [Specific Chemical Identity/Common Name(s)]	C.A.S	OSHA PEL	ACGIH TLV	Other Limits	% (optional)
No hazardous components present. No presence of chemicals classified as carcinogenic or hazardous.					

D.O.T. Proper Shipping Name: D.O.T. Hazard Class: D.O.T. Identification Number:	Not Applicable.

III – Physical Data

Boiling Point (degrees F):	Not Applicable.	Specific Gravity (H_2O = 1):	Approximately 0.9.
Vapor Pressure (mm Hg.):	Negligible.	Percent Volatile by Volume (%):	Not Applicable.
Vapor Density (Air = 1):	Not Applicable.	Evaporation Rate (Butyl Acetate = 1):	Not Applicable.
Solubility in Water:	Insoluble in Water.	Appearance and Odor:	Clear, Odorless Film.

IV – Fire and Explosion Hazard Data

Flash Point (Method Used):	Not Applicable.	Flammable Limits	Lower	Upper
		N/A	N/A	N/A
Extinguish Media:	Water, CO_2, foam. No unusual hazard extinguishing materials.	**WARNING**	Flammable Liquid N/A Combustible Liquid N/A	
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus.	Unusual Fire and Explosion Hazards:	HCL fumes. If exposed to fumes, use mask or breathing apparatus.	

V – Reactivity Data

Stability:	☐ Unstable ☑ Stable	Conditions to Avoid
Incompatibility (materials to avoid):	None are known.	
Hazardous Decomposition Products:		
Hazardous Polymerization	☐ May Occur ☑ Will Not Occur	Conditions to Avoid

VI – Health Hazard Data

Primary Routes of Entry	☐ Inhalation	☑ Ingestion	Carcinogen Listed In	☐ NTP	☐ OSHA
	☐ Skin Absorption	☐ Not Hazardous		☐ IANC Monograph	☑ Not Listed
Health Hazards:	Acute	None Known.			
	Chronic	None Known.			
Effects of Overexposure:	None known.				
Pre-existing Conditions Aggravated by Exposure:	None known.				
Emergency and First Aid Procedure:	Seek medical assistance for further treatment, observation and support if necessary.				
Eyes contact:	Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms persist.				
Skin contact:	If burned by contact with molten material, cool as quickly as possible. Do not peel material from skin. Get medical attention for a thermal burn. Normal skin contact is non-irritant.				
Inhalation:	Fumes during heat sealing are low toxicity and not harsh, however, local ventilation advised.				
Ingestion:	Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary. Very low toxicity expected from ingestion.				

VII – Special Protection Information

Respiratory Protection (Specific Type):	No requirements, however, local ventillation in sealing areas advised for comfort.		
Protective Gloves:	No Special Requirements.	Eye Protection:	No protection needed.
Ventilation To Be Used	☑ Local Exhaust For comfort. ☐ Other (Specify)	☐ Mechanical (General)	☐ Special
Other protective Clothing and Equipment:	No special requirements.		
Hygiene Work Practices:	Normal good hygiene.		

VIII – Spill or Leak Procedures

Steps to be Taken in Case Material is Released or Spilled:	Promptly clean up film trim and waste using normal good housekeeping practices.
Waste Disposal Method:	By any method as a non-hazardous material in accordance with Federal, State, and Local requirements.

IX – Special Precautions

Precautions to be Taken in Handling and Storing:	Cool and dry storage suggested. Protect from excessive heat and direct sunlight.
Other Precautions:	Recommended storage temperature of 50° to 70° F.

Date: February 11, 2004

***Notice:** **Traco Manufacturing, Inc.** believes that the information contained on this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.

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