



Applicant : Panini S.p.A.
 Viale Emilio Po, 380 - 41126 Modena - Italy

Sample Description : Standard Panini Card production

Panini Ref # : 003891

Test Sample Receipt Date, Location : 2020-02-05, Hong Kong

Test Period, Location : From 2020-02-06 to 2020-02-18, Hong Kong

Test Result(s) : Refer to Section 3

Purpose Of Examination / Conclusion:

No.	Test Item(s)	Conclusion
	Test in accordance with ASTM F963-17 Standard Consumer Safety Specification for Toy Safety	
1.	Mechanical and Physical Properties	Pass [#]
2.	Flammability	Pass
3.	Clause 4.3.5 Heavy Elements Content - Soluble Migrated Elements	Pass
4.	Clause 4.3.5 Heavy Elements Content – Total Lead Content	Pass
5.	Heavy Metals - NERC Toxic In Packaging	Pass
6.	Phthalates U.S. CFR Title 16 Part 1307	Pass
7.	Total Lead Consumer Product Safety Improvement Act of 2008 (Section 101)	Pass
8.	Phthalates California Proposition 65, with reference to consent judgment no. BG07350969 settled by superior court of the state of California for the county of Alameda	Pass
9.	Total Lead California Proposition 65, with reference to consent judgment no. RG-07-356892 settled by superior court of the state of California for the county of Alameda	Pass
10.	EN71-1:2014 + A1:2018 - Mechanical and Physical Properties	Pass [#]
11.	EN71-2:2011+A1:2014 - Flammability	Pass
12.	EN71-3:2019 - Migration of certain elements	Pass
13.	Heavy metals - Packaging and packaging waste (Article 11 of 94/62/EC and 2005/20/EC)	Pass



No.	Test Item(s)	Conclusion
14.	Organotin Compounds (Diocetyl tin DOT/Di-n-butyltin DBT/ Tributyltin TBT/ Triphenyltin TPhT/Trioctyltin TOT/ Tricyclohexyltin TCyT/ Tripropyltin TPrT) Regulation (EC) No.1907/2006 (REACH) and its amendments, Annex XVII, Entry 20	Pass
15.	Polycyclic Aromatic Hydrocarbons (PAHs) German Committee on Product Safety (AfPS) AfPS GS 2019:01 PAK	Pass
16.	Polycyclic Aromatic Hydrocarbons (PAHs) Regulation (EC) No.1907/2006 and its amendment (EU) No. 1272/2013 Regulation (EC) No. 552/2009 (REACH) Annex XVII, Entry 50	Pass
17.	Phthalates Regulation (EC) No.1907/2006 and its amendment Regulation (EU) No. 2018/2005 (REACH) Annex XVII, Entry 51 and 52	Pass
18.	Short-Chain Chlorinated Paraffins (SCCP) POPs Regulation (EU) 2019/1021	Pass
19.	Total Lead Regulation (EC) No.1907/2006 (REACH) Annex XVII, Entry 63 and its amendment Regulation (EU) 2015/628	Pass
20.	Total Cadmium Regulation (EU) 2016/217, amending Annex XVII to Regulation (EC) No. 1907/2006 Entry 23.	Pass

Remarks:

- (1) The results relate only to the items tested.
- (2) Samples are tested as received.
- (3) "Pass" means the measured result is within a limit, even when extended by expanded uncertainty. "Fail" means the measured result is beyond a limit, even when extended by expanded uncertainty. "Inconclusive" means the measured result can be within or beyond a limit when extended by expanded uncertainty. The confidence level of the expanded uncertainty for "Pass", "Fail" and "Inconclusive" is 95%.
- (4) “#” denotes labeling review was not requested by applicant.

Test Report No.: 60.452.20.0208.01F

Dated: 2020-02-19



TÜV SÜD Hong Kong
TÜV SÜD Group

Prepared by:

Reviewed by:

A handwritten signature in blue ink that reads 'Ruby'.

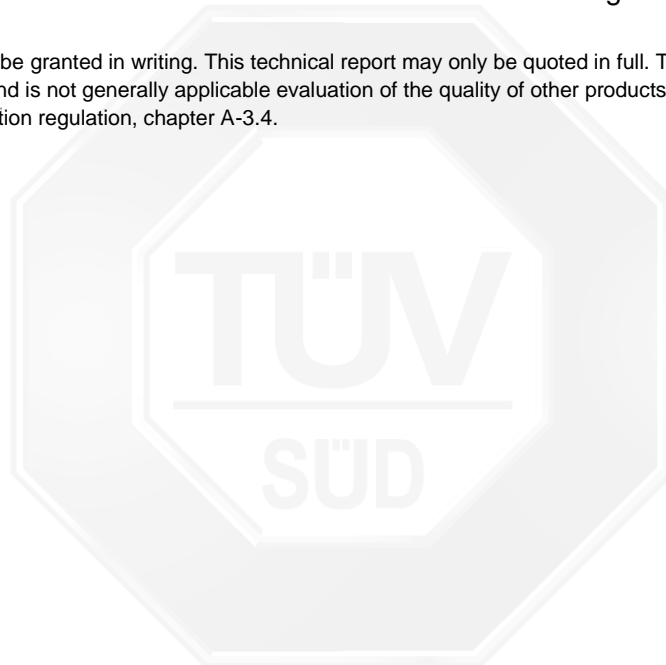


A handwritten signature in blue ink that reads 'Hilda'.

Ruby Wong
Project Manager

Hilda Tang
Manager

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1. Description of the Test Sample:



2. List of Materials as identified by the Laboratory:

T. No.	Sample No.	Colour and Description
T1	001	Whole product
T2	002	White paper with multicolor printing (Cards - Type 1 BASE Categories)
T3	003	White paper with multicolor printing (Cards - Type 2 Fans Category)
T4	004	Transparent soft plastic with white paper and multicolor printing (Cards - Type 3 & 4 Power Up Category / Multiple Category)
T5	005	Transparent soft plastic with white paper and multicolor printing (Cards - Type 5 Rae Category)
T6	006	Transparent soft plastic with white paper and multicolor printing (Bag)



3. Test Results

Sample:	001
Packaging:	Yes (Actual packaging)
Labeled age grade:	Not Declared
Appropriate age grading:	For ages over 3 years
Applicant requested testing age:	3+
Applied testing age grading:	For ages over 3 years

3.1 Mechanical and Physical Properties

Test in accordance with ASTM F963-17

Sample 001		
Clause	Title/ Description	Remark*
4	Safety Requirements	--
4.1	Material Quality (Visual Assessment)	C
4.7	Accessible Edges	C
4.9	Accessible Points	C
7	Producer's Markings	--#

* Abbreviation:

C = Complied

= Labeling review was not requested by applicant.

3.2 Test in accordance with ASTM F963-17

Flammability 4.2-Annex 5

Sample 001		
Clause	Title/ Description	Remark*
4.2-A5	Flammability of Solids and Soft Toys In accordance with Annex A5 Flammability on Solids and Soft Toys	C

* Abbreviation:

C = Complied

Note: Maximum permissible burning rate = 0.1 in/sec.



3.3 ASTM F 963-17 Clause 4.3.5 Heavy Elements Content - Soluble Migrated Elements

Test according to ASTM F 963-17 Section 8.3.2 Heavy metal analysis was determined by Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES).

Migration Elements	Results [mg/kg]			Maximum Permissible Limits [mg/kg]
	Sample 002	Sample 003	Sample 004	
Soluble Antimony	<5.0	<5.0	<5.0	60
Soluble Arsenic	<5.0	<5.0	<5.0	25
Soluble Lead	<5.0	<5.0	<5.0	90
Soluble Cadmium	<5.0	<5.0	<5.0	75
Soluble Selenium	<5.0	<5.0	<5.0	500
Soluble Mercury	<5.0	<5.0	<5.0	60
Soluble Chromium	<5.0	<5.0	<5.0	60
Soluble Barium	<5.0	<5.0	<5.0	1000
Conclusion	Pass	Pass	Pass	-

Migration Elements	Results [mg/kg]	Maximum Permissible Limits [mg/kg]
	Sample 005	
Soluble Antimony	<5.0	60
Soluble Arsenic	<5.0	25
Soluble Lead	<5.0	90
Soluble Cadmium	<5.0	75
Soluble Selenium	<5.0	500
Soluble Mercury	<5.0	60
Soluble Chromium	<5.0	60
Soluble Barium	<5.0	1000
Conclusion	Pass	-

- Note 1. "<" denotes less than
 2. "mg/kg" denotes milligram per kilogram



3.4 Clause 4.3.5 Heavy Elements Content – Total Lead Content

Test according to ASTM F 963-17 Section 8.3.1

Heavy metal analysis was determined by Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES).

[Reporting Limit = 25.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 002	Sample 003	Sample 004
Lead	<25.0	<25.0	<25.0
Limit	<100 mg/kg		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 005
Lead	<25.0
Limit	<100 mg/kg
Conclusion	Pass

- Note 1. "mg/kg" denotes milligram per kilogram
 2. "<" denotes less than

3.5 Heavy Metals - NERC Toxic In Packaging

Microwave digestion and followed by Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES)

[Reporting Limits Cd = 10.0, Cr(VI) = 10.0, Pb = 10.0, Hg = 10.0, all in ppm]

Analyte	Results [ppm]
	Sample 006
Cadmium	<10.0
Chromium VI	<10.0*
Lead	<10.0
Mercury	<10.0
Cd + Cr(VI) + Pb + Hg	<40
Limit	Cd + Cr(VI) + Pb + Hg < 100
Conclusion	Pass

Note:

1. "<" denotes less than
2. "ppm" denotes part per million by weight
3. "*" values of total chromium content are reported here unless otherwise specified.



3.6 Phthalates

U.S. CFR Title 16 Part 1307

CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates

[Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]			Limit [%]
		Sample 002	Sample 003	Sample 004	
Bis (2-ethylhexyl) phthalate, DEHP	117-81-7	<0.005	<0.005	<0.005	<0.1
Dibutyl phthalate, DBP	84-74-2	<0.005	<0.005	<0.005	<0.1
Benzyl butyl phthalate, BBP	85-68-7	<0.005	<0.005	<0.005	<0.1
Di-isononyl phthalate, DINP	28553-12-0 , 68515-48-0	<0.005	<0.005	<0.005	<0.1
Diisobutyl phthalate, DIBP	84-69-5	<0.005	<0.005	<0.005	<0.1
Di-n-pentyl phthalates, DPENP	131-18-0	<0.005	<0.005	<0.005	<0.1
Di-n-hexyl phthalate, DHEXP	84-75-3	<0.005	<0.005	<0.005	<0.1
Dicyclohexyl phthalate, DCHP	84-61-7	<0.005	<0.005	<0.005	<0.1
Conclusion		Pass	Pass	Pass	-

Phthalates	CAS No.	Results [%]	Limit [%]
		Sample 005	
Bis (2-ethylhexyl) phthalate, DEHP	117-81-7	<0.005	<0.1
Dibutyl phthalate, DBP	84-74-2	<0.005	<0.1
Benzyl butyl phthalate, BBP	85-68-7	<0.005	<0.1
Di-isononyl phthalate, DINP	28553-12-0 , 68515-48-0	<0.005	<0.1
Diisobutyl phthalate, DIBP	84-69-5	<0.005	<0.1
Di-n-pentyl phthalates, DPENP	131-18-0	<0.005	<0.1
Di-n-hexyl phthalate, DHEXP	84-75-3	<0.005	<0.1
Dicyclohexyl phthalate, DCHP	84-61-7	<0.005	<0.1
Conclusion		Pass	-

Note 1. "<" denotes less than

2. "%" denotes percentage by weight

3. Not more than 0.1% of each DEHP, DBP, BBP, DINP, DIBP, DPENP, DHEXP, DCHP for children's toys and child care articles.



3.7 Total Lead

Consumer Product Safety Improvement Act of 2008 (Section 101)

Test in accordance with CPSC-CH-E1002-08.3 (Non-Metallic components)

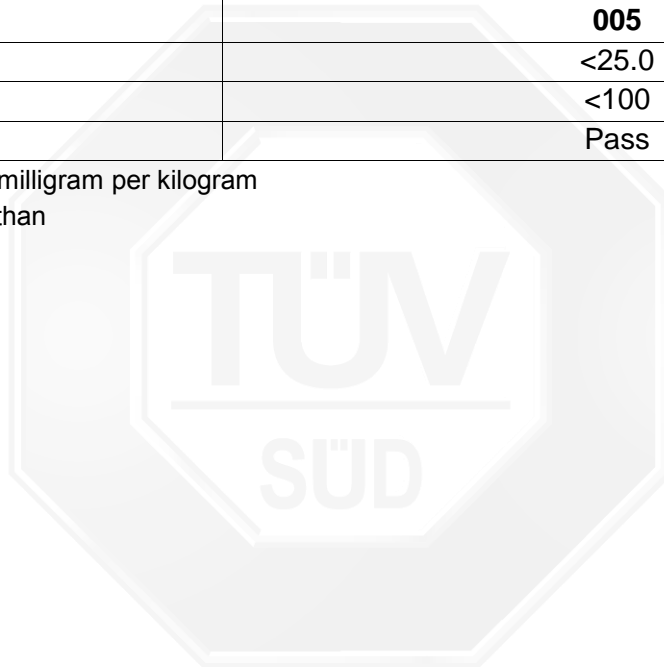
[Reporting Limit = 25.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 002	Sample 003	Sample 004
Lead	<25.0	<25.0	<25.0
Limit	<100		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 005
Lead	<25.0
Limit	<100
Conclusion	Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than





3.8 Phthalates

California Proposition 65, with reference to consent judgment no. BG07350969 settled by superior court of the state of California for the county of Alameda

Solvent extraction and GC-MS analysis

[Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [% w/w]			Limit [% w/w]
		Sample 002	Sample 003	Sample 004	
Dibutyl phthalate, (DBP)	84-74-2	<0.005	<0.005	<0.005	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	<0.005	<0.005	<0.005	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	<0.005	<0.005	<0.005	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	<0.005	<0.005	<0.005	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	<0.005	<0.005	<0.005	<0.1
Conclusion		Pass	Pass	Pass	-

Phthalates	CAS No.	Results [% w/w]	Limit [% w/w]
		Sample 005	
Dibutyl phthalate, (DBP)	84-74-2	<0.005	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	<0.005	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	<0.005	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	<0.005	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	<0.005	<0.1
Conclusion		Pass	-

Note 1. "<" denotes less than

2. "% w/w" denotes percentage by weight



3.9 Total Lead

California Proposition 65, with reference to consent judgment no. RG-07-356892 settled by superior court of the state of California for the county of Alameda

Microwave Digestion and detection with ICP-OES

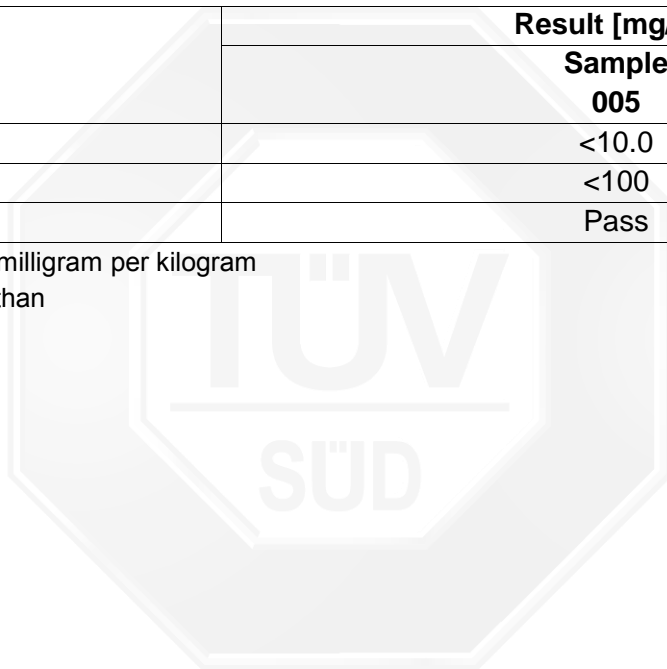
[Reporting Limit = 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 002	Sample 003	Sample 004
Lead	<10.0	<10.0	<10.0
Limit	<100		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 005
Lead	<10.0
Limit	<100
Conclusion	Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than





3.10 Mechanical and Physical Properties

Test in accordance with EN71-1:2014+A1:2018

Sample 001		
Clause	Title/ Description	Remark*
4	General requirements	--
4.1	Material cleanliness	C
4.7	Edges	C
4.8	Points and metallic wires	C
7	Warnings and instructions for use	--#

Remarks:

* Abbreviation:

C = Complied

= Labeling review was not requested by applicant

3.11 Flammability

Test in accordance with EN 71 - 2 : 2011 + A1 : 2014

Sample 001		
Clause	Title/ Description	Remark*
4.1	General requirements	C

Remark:

Note 1: No celluloid (cellulose nitrate) and materials with the same behaviour in fire as celluloid was detected

* Abbreviation:

C = Complied

3.12 Migration of certain elements

With reference to Directive 2009/48/EC and its amendment Commission Directive (EU) 2019/1922 on the Safety of Toys

Sample preparation with reference to EN 71-3 : 2019 Migration of certain elements.

As stated in the above specifications. Heavy metal analysis was determined by Inductively Coupled Plasma Mass Spectrometry (ICP-MS).

Migration Elements	Results [mg/kg]			Maximum Permissible Limits [mg/kg]
	Sample 002	Sample 003	Sample 004	Category 3
Soluble Aluminum	509	77.5	512	28130 [^]
Soluble Antimony	<5.00	<5.00	<5.00	560
Soluble Arsenic	<5.00	<5.00	<5.00	47
Soluble Barium	<5.00	<5.00	<5.00	18750
Soluble Boron	<5.00	<5.00	<5.00	15000
Soluble Cadmium	<5.00	<5.00	<5.00	17
Soluble Chromium	0.050	0.049	0.050	CrIII: 460mg/kg CrVI: 0.053mg/kg
Soluble Chromium III	0.050 ^{#2}	0.049 ^{#2}	0.050 ^{#2}	460
Soluble Chromium VI	<0.04 ^{#2}	<0.04 ^{#2}	<0.04 ^{#2}	0.053
Soluble Cobalt	<5.00	<5.00	<5.00	130
Soluble Copper	<5.00	<5.00	<5.00	7700
Soluble Lead	<5.00	<5.00	<5.00	23
Soluble Manganese	5.40	5.34	5.72	15000
Soluble Mercury	<5.00	<5.00	<5.00	94
Soluble Nickel	<5.00	<5.00	<5.00	930
Soluble Selenium	<5.00	<5.00	<5.00	460
Soluble Strontium	97.8	129	144	56000
Soluble Tin	<3.00	<3.00	<3.00	180000
Organic Tin	<7.50 ^{#3}	<7.50 ^{#3}	<7.50 ^{#3}	12
Soluble Zinc	<5.00	<5.00	<5.00	46000
Conclusion	Pass	Pass	Pass	-

- Note
1. "<" denotes less than
 2. "mg/kg" denotes milligram per kilogram
 3. "[^]" denotes limit will be effective from 20 May, 2021 according to Directive (EU) 2019/1922.
 4. "^{#2}" denotes Chromium (VI) is determined by Ion Chromatography with UV-VIS Detector and Chromium (III) is calculated by [Total chromium - Chromium (VI)].
 5. "^{#3}" denotes Organic Tin is determined by screening of total Tin express as Tributyl Tin



3.12 Migration of certain elements

With reference to Directive 2009/48/EC and its amendment Commission Directive (EU) 2019/1922 on the Safety of Toys

Sample preparation with reference to EN 71-3 : 2019 Migration of certain elements.

As stated in the above specifications. Heavy metal analysis was determined by Inductively Coupled Plasma Mass Spectrometry (ICP-MS).

Migration Elements	Results [mg/kg]	Maximum Permissible Limits [mg/kg]
	Sample 005	Category 3
Soluble Aluminum	479	28130 [^]
Soluble Antimony	<5.00	560
Soluble Arsenic	<5.00	47
Soluble Barium	<5.00	18750
Soluble Boron	<5.00	15000
Soluble Cadmium	<5.00	17
Soluble Chromium	0.050	CrIII: 460mg/kg CrVI: 0.053mg/kg
Soluble Chromium III	0.050 ^{#2}	460
Soluble Chromium VI	<0.04 ^{#2}	0.053
Soluble Cobalt	<5.00	130
Soluble Copper	<5.00	7700
Soluble Lead	<5.00	23
Soluble Manganese	5.70	15000
Soluble Mercury	<5.00	94
Soluble Nickel	<5.00	930
Soluble Selenium	<5.00	460
Soluble Strontium	74.2	56000
Soluble Tin	<3.00	180000
Organic Tin	<7.50 ^{#3}	12
Soluble Zinc	<5.00	46000
Conclusion	Pass	-

Note 1. "<" denotes less than

2. "mg/kg" denotes milligram per kilogram

3. "[^]" denotes limit will be effective from 20 May, 2021 according to Directive (EU) 2019/1922.

4. "^{#2}" denotes Chromium (VI) is determined by Ion Chromatography with UV-VIS Detector and Chromium (III) is calculated by [Total chromium - Chromium (VI)].

5. "^{#3}" denotes Organic Tin is determined by screening of total Tin express as Tributyl Tin



3.13 Heavy metals - Packaging and packaging waste (Article 11 of 94/62/EC and 2005/20/EC)

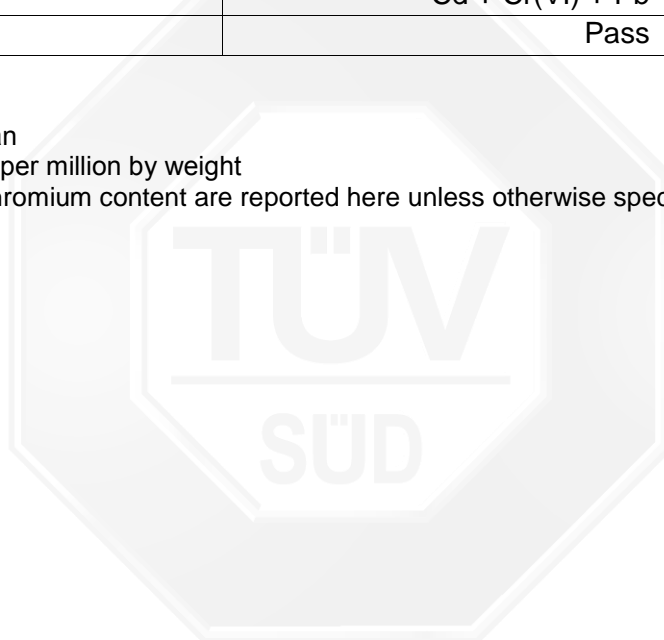
Microwave digestion and followed by Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES)

[Reporting Limits Cd = 10.0, Cr(VI) = 10.0, Pb = 10.0, Hg = 10.0, all in ppm]

Analyte	Results [ppm]
	Sample 006
Cadmium	<10.0
Chromium VI*	<10.0*
Lead	<10.0
Mercury	<10.0
Cd + Cr(VI) + Pb + Hg	<40
Limit	Cd + Cr(VI) + Pb + Hg < 100
Conclusion	Pass

Note:

1. "<" denotes less than
2. "ppm" denotes part per million by weight
3. "*" values of total chromium content are reported here unless otherwise specified.





3.14 Organotin Compounds (Diocetyltn DOT/Di-n-butyltin DBT/ Tributyltin TBT/ Triphenyltin TPhT/Trioctyltin TOT/ Tricyclohexyltin TCyT/ Tripropyltin TPrT)

Regulation (EC) No.1907/2006 (REACH) and its amendments, Annex XVII, Entry 20

In house method test with reference to DIN EN ISO 17353:2005, solvent extraction with acidified methanol, followed by derivatization and GC-MS analysis

[Reporting Limit = 0.125mg/kg]

Compounds	CAS No.	Result [mg/kg]		
		Sample 002	Sample 003	Sample 004
Diocetyltn(DOT)	250252-87-0 94410-05-6 3542-36-7	<0.125	<0.125	<0.125
Dibutyltin (DBT)	14488-53-0 1002-53-5 683-18-1	<0.125	<0.125	<0.125
Tributyltin (TBT)	36643-28-4 1461-22-9	<0.125	<0.125	<0.125
Triphenyltin(TPhT)	668-34-8 639-58-7	<0.125	<0.125	<0.125
Tri-n-octyltin (TOT)	2587-76-0 869-59-0	<0.125	<0.125	<0.125
Tricyclohexyltin(TcyT)	36580-86-6 3091-32-5	<0.125	<0.125	<0.125
Tripropyltin(TPrT)	2279-76-7	<0.125	<0.125	<0.125
Maximum Permissible Limit		DOT, DBT, TBT, TPhT, TOT, TCyT, TPrT each <1000		
Conclusion				

Note:

1. "mg/kg" denotes milligram per kilogram
2. "<" denotes less than



3.14 Organotin Compounds (Diocetyltn DOT/Di-n-butyltin DBT/ Tributyltin TBT/ Triphenyltin TPhT/Trioctyltin TOT/ Tricyclohexyltin TCyT/ Tripropyltin TPrT)

Regulation (EC) No.1907/2006 (REACH) and its amendments, Annex XVII, Entry 20

In house method test with reference to DIN EN ISO 17353:2005, solvent extraction with acidified methanol, followed by derivatization and GC-MS analysis

[Reporting Limit = 0.125mg/kg]

Compounds	CAS No.	Result [mg/kg]
		Sample 005
Diocetyltn(DOT)	250252-87-0 94410-05-6 3542-36-7	<0.125
Dibutyltin (DBT)	14488-53-0 1002-53-5 683-18-1	<0.125
Tributyltin (TBT)	36643-28-4 1461-22-9	<0.125
Triphenyltin(TPhT)	668-34-8 639-58-7	<0.125
Tri-n-octyltin (TOT)	2587-76-0 869-59-0	<0.125
Tricyclohexyltin(TcyT)	36580-86-6 3091-32-5	<0.125
Tripropyltin(TPrT)	2279-76-7	<0.125
Maximum Permissible Limit		DOT, DBT, TBT, TPhT, TOT, TCyT, TPrT each <1000
Conclusion		Pass

Note:

1. "mg/kg" denotes milligram per kilogram
2. "<" denotes less than



3.15 Polycyclic Aromatic Hydrocarbons (PAHs)

Test according to German Committee on Product Safety (AfPS) AfPS GS 2019:01 PAK

Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.05mg/kg]

Compounds	CAS No.	Results [mg/kg]		
		Sample 002	Sample 003	Sample 004
Naphthalene	91-20-3	<0.05	<0.05	<0.05
Phenanthrene	85-01-8	<0.05	<0.05	<0.05
Anthracene	120-12-7	<0.05	<0.05	<0.05
Fluoranthene	206-44-0	<0.05	<0.05	<0.05
Pyrene	129-00-0	<0.05	<0.05	<0.05
Sum of 4 PAHs	-	<0.20	<0.20	<0.20
Benzo[a]anthracene	56-55-3	<0.05	<0.05	<0.05
Chrysene	218-01-9	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	205-99-2	<0.05	<0.05	<0.05
Benzo[j]fluoranthene	205-82-3	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	207-08-9	<0.05	<0.05	<0.05
Benzo[a]pyrene	50-32-8	<0.05	<0.05	<0.05
Benzo[e]pyrene	192-97-2	<0.05	<0.05	<0.05
Benzo[ghi]perylene	191-24-2	<0.05	<0.05	<0.05
dibenzo[ah]anthracene	53-70-3	<0.05	<0.05	<0.05
Indeno[1,2,3-cd]pyrene	193-39-5	<0.05	<0.05	<0.05
Sum of detected 15 PAHs	-	<1.0	<1.0	<1.0
Category		Category 1	Category 1	Category 1
Conclusion		Pass	Pass	Pass

Note:

1. "mg/kg" denotes milligram per kilogram
2. "<" denotes less than
3. Limit:

Parameter (mg/kg)	Category 1 Materials intended to be taken into the mouth, or materials in toys acc. to DIR 2009/48/EC or materials in articles intended for the use by children up to 3 years of age having long-term skin contact (more than 30s) within intended use	Category 2 Materials that do not fall into category 1, with long-term skin contact (more than 30s) or repeated short-term skin contact ^b within intended or foreseeable use ^a		Category 3 Materials that do neither fall into category 1 nor 2, with short-term skin contact (up to 30s) within foreseeable use ^a	
		Use by children ^{c,d}	Other consumer products	Use by children ^{c,d}	Other consumer products
-	-	Use by children ^{c,d}	Other consumer products	Use by children ^{c,d}	Other consumer products
Benzo[a]pyrene, Benzo[e]pyrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[j]fluoranthene, Benzo[k]fluoranthene, Chrysene, Dibenzo[a,h]anthracene, Benzo[ghi] perylene, Indeno[1,2,3-cd] pyrene	Each < 0.2	Each < 0.2	Each <0.5	Each <0.5	Each <1
Naphthalene	<1	<2		<10	
Sum of Phenanthrene, Pyrene, Anthracene, Fluoranthene,	Sum <1	Sum <5	Sum <10	Sum <20	Sum <50
Sum 15 PAHs	<1	<5	<10	<20	<50

Note 1 : "a" denotes according to terminology of the Product Safety Act (ProdSG) (section 1 Paragr. 2 no. 28) intended use means the use of a product in a manner which has not been intended by the person that placed it on the market, however, is reasonably foreseeable.

Note 2 : "b" denotes wording "repeated short-team skin contact" according to REACH Annex XVII No. 50 supplement (Regulation (EU) no. 1272/2013).

Note 3 : "c" denotes a "child" is legally defined as a person who has reached the age of 14 years.

Note 4 : "d" denotes use by children includes both active and passive direct contact by children.



3.15 Polycyclic Aromatic Hydrocarbons (PAHs)

Test according to German Committee on Product Safety (AfPS) AfPS GS 2019:01 PAK
 Solvent extraction followed by GC-MS analysis
 [Reporting Limit = 0.05mg/kg]

Compounds	CAS No.	Results [mg/kg]
		Sample 005
Naphthalene	91-20-3	<0.05
Phenanthrene	85-01-8	<0.05
Anthracene	120-12-7	<0.05
Fluoranthene	206-44-0	<0.05
Pyrene	129-00-0	<0.05
Sum of 4 PAHs	-	<0.20
Benzo[a]anthracene	56-55-3	<0.05
Chrysene	218-01-9	<0.05
Benzo[b]fluoranthene	205-99-2	<0.05
Benzo[j]fluoranthene	205-82-3	<0.05
Benzo[k]fluoranthene	207-08-9	<0.05
Benzo[a]pyrene	50-32-8	<0.05
Benzo[e]pyrene	192-97-2	<0.05
Benzo[ghi]perylene	191-24-2	<0.05
dibenzo[ah]anthracene	53-70-3	<0.05
Indeno[1,2,3-cd]pyrene	193-39-5	<0.05
Sum of detected 15 PAHs	-	<1.0
Category		Category 1
Conclusion		Pass

Note:

1. "mg/kg" denotes milligram per kilogram
2. "<" denotes less than
3. Limit:

Parameter (mg/kg)	Category 1 Materials intended to be taken into the mouth, or materials in toys acc. to DIR 2009/48/EC or materials in articles intended for the use by children up to 3 years of age having long-term skin contact (more than 30s) within intended use	Category 2 Materials that do not fall into category 1, with long-term skin contact (more than 30s) or repeated short-term skin contact ^a within intended or foreseeable use ^a		Category 3 Materials that do neither fall into category 1 nor 2, with short-term skin contact (up to 30s) within foreseeable use ^a	
		Use by children ^{c,d}	Other consumer products	Use by children ^{c,d}	other consumer products
-	-	Use by children ^{c,d}	Other consumer products	Use by children ^{c,d}	other consumer products
Benzo[a]pyrene, Benzo[e]pyrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[j]fluoranthene, Benzo[k]fluoranthene, Chrysene, Dibenzo[a,h]anthracene, Benzo[ghi] perylene, Indeno[1,2,3-cd] pyrene	Each < 0.2	Each < 0.2	Each <0.5	Each <0.5	Each <1
Naphthalene	<1	<2		<10	
Sum of Phenanthrene, Pyrene, Anthracene, Fluoranthene,	Sum <1	Sum <5	Sum <10	Sum <20	Sum <50
Sum 15 PAHs	<1	<5	<10	<20	<50

Note 1 : "^a" denotes according to terminology of the Product Safety Act (ProdSG) (section 1 Paragr. 2 no. 28) intended use means the use of a product in a manner which has not been intended by the person that placed it on the market, however, is reasonably foreseeable.

Note 2 : "^b" denotes wording "repeated short-team skin contact" according to REACH Annex XVII No. 50 supplement (Regulation (EU) no. 1272/2013).

Note 3 : "^c" denotes a "child" is legally defined as a person who has reached the age of 14 years.

Note 4 : "^d" denotes use by children includes both active and passive direct contact by children.

3.16 Polycyclic Aromatic Hydrocarbons (PAHs)

Regulation (EC) No.1907/2006 and its amendment (EU) No. 1272/2013

Regulation (EC) No. 552/2009 (REACH) Annex XVII, Entry 50

Test with reference to AfPS GS 2014:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.05mg/kg]

PAHs	CAS No.	Results [mg/kg]		
		Sample 002	Sample 003	Sample 004
Benz[b]fluoranthene (BbFA)	205-99-2	<0.05	<0.05	<0.05
Benzo[a]anthracene (BaA)	56-55-3	<0.05	<0.05	<0.05
Benzo[a]pyrene (BaP)	50-32-8	<0.05	<0.05	<0.05
Benzo[e]pyrene (BeP)	192-97-2	<0.05	<0.05	<0.05
Benzo[j]fluoranthene (BjFA)	205-82-3	<0.05	<0.05	<0.05
Benzo[k]fluoranthene (BkFA)	207-08-9	<0.05	<0.05	<0.05
Chrysene (CHR)	218-01-9	<0.05	<0.05	<0.05
Dibenzo[a,h]anthracene (DBAhA)	53-70-3	<0.05	<0.05	<0.05
Limit		Each <0.5		
Conclusion		Pass	Pass	Pass

PAHs	CAS No.	Results [mg/kg]
		Sample 005
Benz[b]fluoranthene (BbFA)	205-99-2	<0.05
Benzo[a]anthracene (BaA)	56-55-3	<0.05
Benzo[a]pyrene (BaP)	50-32-8	<0.05
Benzo[e]pyrene (BeP)	192-97-2	<0.05
Benzo[j]fluoranthene (BjFA)	205-82-3	<0.05
Benzo[k]fluoranthene (BkFA)	207-08-9	<0.05
Chrysene (CHR)	218-01-9	<0.05
Dibenzo[a,h]anthracene (DBAhA)	53-70-3	<0.05
Limit		Each <0.5
Conclusion		Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

3. Limit: 0.5 mg/kg for Toys (including activity toys): Childcare articles, 1.0 mg/kg for sports equipment such as bicycles, golf clubs, racquets; House-hold utensils, trolleys, walking frames; tools for domestic use; Clothing footwear, gloves and sportswear; Watch-straps, wrist-bands, masks, head-bands.

3.17 Phthalates

Regulation (EC) No.1907/2006 and its amendment

Regulation (EU) No. 2018/2005 (REACH) Annex XVII, Entry 51 and 52

Solvent extraction and GC-MS analysis.

[Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]			Limit [%]
		Sample 002	Sample 003	Sample 004	
Bis (2-ethylhexyl) phthalate, DEHP	117-81-7	<0.005	<0.005	<0.005	Sum of DEHP, DBP, BBP & DIBP: <0.1% by weight ^{#1 #3}
Dibutyl phthalate, DBP	84-74-2	<0.005	<0.005	<0.005	
Benzyl butyl phthalate, BBP	85-68-7	<0.005	<0.005	<0.005	
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.005	<0.005	
Sum of DBP, BBP, DEHP, DIBP	-	<0.005	<0.005	<0.005	
Di-isononyl phthalate, DINP	28553-12-0 , 68515-48-0	<0.005	<0.005	<0.005	Sum of DINP, DIDP & DNOP: <0.1% by weight ^{#2}
Di-isodecyl phthalate, DIDP	26761-40-0 , 68515-49-1	<0.005	<0.005	<0.005	
Di-n-octyl phthalate, DNOP	117-84-0	<0.005	<0.005	<0.005	
Sum of DINP, DIDP, DNOP	-	<0.005	<0.005	<0.005	
Conclusion		Pass	Pass	Pass	-

Note 1. "<" denotes less than

2. "%" denotes percentage by weight

3. "#1" denotes the limit of DEHP, DBP, BBP and DIBP for toys and child care articles that placed on the market will be effective from July 7, 2020.

4. "#2" denotes the limit of DINP, DIDP and DNOP for toys and child care articles that can be placed in the mouth.

5. "#3" denotes the limit of DEHP, DBP, BBP and DIBP for plasticized material in articles that placed on the market will be effective from July 7, 2020.



3.17 Phthalates

Regulation (EC) No.1907/2006 and its amendment
 Regulation (EU) No. 2018/2005 (REACH) Annex XVII, Entry 51 and 52
 Solvent extraction and GC-MS analysis.
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]	Limit [%]
		Sample 005	
Bis (2-ethylhexyl) phthalate, DEHP	117-81-7	<0.005	Sum of DEHP, DBP, BBP & DIBP: <0.1% by weight ^{#1 #3}
Dibutyl phthalate, DBP	84-74-2	<0.005	
Benzyl butyl phthalate, BBP	85-68-7	<0.005	
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	
Sum of DBP, BBP, DEHP, DIBP	-	<0.005	
Di-isononyl phthalate, DINP	28553-12-0 , 68515-48-0	<0.005	Sum of DINP, DIDP & DNOP: <0.1% by weight ^{#2}
Di-isodecyl phthalate, DIDP	26761-40-0 , 68515-49-1	<0.005	
Di-n-octyl phthalate, DNOP	117-84-0	<0.005	
Sum of DINP, DIDP, DNOP	-	<0.005	
Conclusion		Pass	-

- Note 1. "<" denotes less than
 2. "%" denotes percentage by weight
 3. "#1" denotes the limit of DEHP, DBP, BBP and DIBP for toys and child care articles that placed on the market will be effective from July 7, 2020.
 4. "#2" denotes the limit of DINP, DIDP and DNOP for toys and child care articles that can be placed in the mouth.
 5. "#3" denotes the limit of DEHP, DBP, BBP and DIBP for plasticized material in articles that placed on the market will be effective from July 7, 2020.

3.18 Short-Chain Chlorinated Paraffins (SCCP)

POPs Regulation (EU) 2019/1021

Extraction with n-hexane and determined by GC-ECD/GC-MS

[Reporting Limit = 0.01%]

Analyte(s)	CAS No.	Results [%]		
		Sample 002	Sample 003	Sample 004
SCCP	85535-84-8	<0.01	<0.01	<0.01
Limit		<0.15		
Conclusion		Pass	Pass	Pass

Analyte(s)	CAS No.	Results [%]
		Sample 005
SCCP	85535-84-8	<0.01
Limit		<0.15
Conclusion		Pass

Note 1. "<" denotes less than

2. "%" denotes percentage by weight

3.19 Total Lead

Regulation (EC) No.1907/2006 (REACH) Annex XVII, Entry 63 and its amendment Regulation (EU) 2015/628

Microwave Digestion and detection with ICP-OES

[Reporting Limit = 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 002	Sample 003	Sample 004
Lead	<10.0	<10.0	<10.0
Limit	<500		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 005
Lead	<10.0
Limit	<500
Conclusion	Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than



3.20 Total Cadmium

Regulation (EU) 2016/217, amending Annex XVII to Regulation (EC) No. 1907/2006 Entry 23.
 Microwave digestion and followed by Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES)
 [Reporting Limit = 10.0mg/kg]

Analyte	Results [mg/kg]		
	Sample 002	Sample 003	Sample 004
Cadmium	<10.0	<10.0	<10.0
Limit	<100		
Conclusion	Pass	Pass	Pass

Analyte	Results [mg/kg]
	Sample 005
Cadmium	<10.0
Limit	<100
Conclusion	Pass

Note 1. "mg/kg" denotes milligram per kilogram
 2. "<" denotes less than

Material / Product	Limit
Plastics	<100 mg/kg
Metal jewellery / imitation jewellery articles and hair accessories	<100 mg/kg
Brazing Fillers	<100 mg/kg
Coating	<1000 mg/kg
Paint with TARIC codes [3208],[3209] Zinc content > 10%	<1000 mg/kg
Paint with TARIC codes [3208],[3209] with Zinc Content ≤ 10%	<100 mg/kg

-- END OF THE TEST REPORT --

General Terms and Conditions

of TÜV SÜD Hong Kong Limited

(hereinafter referred to as *the company*)



1. General Information and Definitions

- (1.1) In the event that an order for any services is placed, the Client shall accept the General Terms and Conditions. The General Terms and Conditions shall be applicable to all orders, resulting contracts and other arrangements, including all offers made or services provided by the Company or any of its affiliated companies. They are not applicable if and as far as they are in conflict with the regulations on services performed on behalf of governments, government bodies or any other public entity, or they are in conflict with mandatory provisions of local law. The Client's placement of orders as well as the conclusion of contracts with the Company shall be regarded as awareness and acceptance of these General Terms and Conditions.
- (1.2) The Company strongly recommends any Client or potential Client to read the full text of these General Terms and Conditions prior to placement of any order to or conclusion of any contract with the Company. Ancillary agreements, promises and other statements made on the part of the Company staff or the experts called upon by them shall be binding only if they are expressly confirmed by the Company in writing. This shall also apply to any modifications of this clause.

2. Provision of Services

- (2.1) With due care and skill, the Company will provide services according to Client's specific instructions as made available by the Client. In the absence of Client's specific instructions, the following is deemed as instructions given to the Company:
- The terms of any standard specification sheet or standard order form provided by the Company; and/or
 - Any relevant usage, practice or trade custom; and/or
 - Such methods the Company considers technically, operationally and/or on financial grounds appropriate.
- (2.2) No other party is entitled to give any instructions particularly on the scope and type of the services or the reports delivered, or on the resulting certificates (the "Reports of Findings"), unless the Company receives prior written instructions to the contrary from the Client. The Client hereby irrevocably authorizes the Company to deliver Reports of Findings to a third party where so instructed by the Client or, at the Company's discretion, where it implicitly follows from circumstances, trade custom, usage or practice.
- (2.3) The Information stated in the Report of Findings is derived from the results of inspection or testing procedures carried out in accordance with the instructions and/or Company's assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in Company's professional experience be taken into account.
- (2.4) Reports of Findings issued after the testing of samples refer the Company's opinion only on samples under testing and not to the lot from which the samples were drawn.
- (2.5) Client agrees that the Company's sole responsibility is to be present at the time of the third party's intervention and to forward the results, or confirm the occurrence of the intervention, in case Client requests the Company to witness any third party's intervention. Client agrees that the Company will use the test methods for analysis as requested in the request form, and if none is stated in the form, the Company will choose the appropriate test methods for analysis.
- (2.6) The Reports of Findings issued by the Company will reflect the facts as recorded by it at the time of its intervention only and within the limits of the instructions received or, in the absence of such instructions, within the limits of the alternative parameters applied as provided for in Clause 2.1. The Company is under no obligation to refer to, or report upon, any facts or circumstances, which are outside the specific instructions received or alternative parameters applied.
- (2.7) The performance of all or part of the services may be delegated to an agent or subcontractor by the Company. The Client authorizes the Company to disclose all information necessary for such performance to the agent or subcontractor.
- (2.8) Documents reflecting engagements contracted between the Client and third parties or third party documents, e.g. sales contract copies, letters of credit, bills of lading, etc. should be made available to the Company. These are considered to be for information only, and do not extend or restrict the scope of the services or the obligations accepted by the Company.
- (2.9) The Company agrees that, by providing the services to the Client, it neither takes the place of Client or any third party, nor otherwise assumes, abridges, abrogates or undertakes to discharge any duty of the Client to any third party or that of any third party to the Client. Also, it does not release the Client or any third party from any of their obligations.
- (2.10) Depending on the nature of each sample, all samples given to the Company shall be retained for a maximum of 3 months or for such other shorter time period as the nature of the sample permits, and then sent back to Client or otherwise disposed of at the Company's discretion. After that time the Company will not be responsible for the samples. Storage of samples for more than 3 months shall incur a storage fee payable by the Client. If samples are returned to the Client, the Client will be billed a handling and freight fees. Special disposal charges will be billed to the Client if incurred.

3. Client's Obligations

The Client shall:

- ensure that all required supporting documents, information and instructions as submitted are accurate, truthful and complete. These information are to be submitted in a timely not later than 2 working days from the date of which the services are requested by the Client
- ensure to give all necessary access for the Company's representatives to the premises where the services are to be performed and to take all necessary steps to eliminate or remedy any obstacles to, or interruptions in the performance of the services;
- make available any special equipment and personnel necessary for the performance of the services, if required;
- ensure that for the safety and security of working conditions, sites and installations, all necessary measures are taken during the performance of services. In this respect, the Client will not rely on the Company's advice whether required or not;
- inform the Company of any known hazards or dangers, actual or potential, associated with any order, samples, testing or any other service rendered by the Company well in advance. Those are, but are not limited to the presence or risk of radiation, environmental pollution or poisons-toxic or noxious or explosive elements or materials;
- fully exercise all its rights and discharge all its liabilities under any relevant sales or other contract with a third party.

4. Fees and Payment

- All Fees not agreed on between the Company and Client at the time the order is placed or a contract is concluded shall be determined by the Company's Schedule of Fees (which are subject to change). All applicable taxes shall be paid by Client, as far as mandatory laws do not provide otherwise.
- Unless a specific period is established in the invoice, the Client shall pay upon receiving the invoice, but not later than 30 days from the relevant invoice date or within such other period as may be established by the Company in the invoice (the "Due Date").
- The Client shall not be entitled to retain or defer due payment of any sums to the Company on account of any dispute, counter claim or set-off against the Company. The Company reserves the right to retain or defer any due payments if any dispute arises with or it raises any counterclaim against the Client. The Company is entitled to set off due payments against payments of the Client.

- For the collection of unpaid fees, the Company may decide to bring action in any court with competent jurisdiction. The corresponding collection costs, including attorney's fees and related costs, shall be borne by the Client, as far as the mandatory local law does not provide otherwise.
- In case of any unforeseen problems or expenses arise while carrying out the services, the Company informs the Client. In such cases, the Company shall be entitled to charge additional fees to cover extra time and to invoice extra costs necessarily incurred to complete the services.
- If the Company is unable to perform all or parts of the services for any cause whatsoever beyond the Company's control, including the failure by Client to comply with any of its obligations provided for in the foregoing Clause 3, the Company shall nevertheless be entitled to payments of:
 - The amount of all non-refundable expenses incurred by the Company; and
 - A proportion of the agreed fee equal to the proportion of the services actually carried out.

5. Suspension or Termination of Services

- In any case mentioned below, the Company shall be entitled to either suspend or terminate the provision of the services immediately and without any liability:
- Failure by the Client to comply with any of its obligations under these General Terms and Conditions and such failure is not remedied within 10 days after a notice of such failure has been delivered to the Client; or
 - Any suspension of payment, arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business by Client.

6. Liability and Indemnification

- (6.1) Limitation of Liability.
- Clients seeking a guarantee against loss or damage should obtain appropriate insurance. The Company is neither an insurer nor a guarantor and disclaims all liability in such capacity.
 - Reports of Findings are issued on the basis of the information, documents and/or samples provided by, or on behalf of the Client and solely for the benefit of the Client who is obliged to act on the basis of such Reports of Findings. Neither the Company nor any of its staff, agents or subcontractors shall be liable to the Client nor to any third party for any actions taken or not taken on the basis of such Reports of Findings, or for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to the Company.
 - For any delayed, total or partial non-performance of the services arising directly or indirectly from any event beyond the Company's control, including failure by Client to comply with any of its obligations hereunder, the Company shall not be liable.
 - The liability of the Company in respect of any claim for loss, damage or expense of any nature and howsoever arising shall in no circumstances exceed a total aggregate sum equal to 10 times the amount of the fee paid in respect of the specific service which gives rise to such claim, and shall in any case not exceed the equivalent of 25,000 EUR in HKD.
 - For any indirect or consequential loss (including loss of profits), the Company shall not have any liabilities.
 - In case of any claim, the Client must give written notice to the Company within 30 days of discovery of the facts with all necessary documents to justify such claim. In any case, the Company shall be discharged from all liability for all claims for loss, damage or expense unless a lawsuit is brought within two years from:
 - the performance date of the Company for its services which refers to the claim; or
 - the date when the service should have been completed in the event of any alleged non-performance.
- (6.2) Indemnification. Against all claims (actual or threatened) by any third party for loss, damage or expenses of whatsoever nature including all legal expenses and related costs and howsoever arising relating to the performance, purported performance or non-performance of any services, the Client shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors.

7. Obligation of Confidentiality, Copyright, Data Privacy Protection

- The Company shall be authorized to make file copies of written documents, which have been made available to it for review and which are important for processing the order.
- Insofar as Reports of Findings are prepared in the course of processing the order and which are subject to the protection of copyright, then the Company shall grant the Client a simple, non-transferable right to use, insofar as this is necessary and in accordance with the contractually presupposed purpose. Other rights shall not be transferred; in particular, the customer shall not be entitled to modify and/or edit audit reports or to make use of such outside of his business premises.
- The Company and its staff which may be called in shall not disclose or use trade and business matters about which they have gained knowledge during the performance of their work without proper authorization, or unless instructed by a court or authorized body (e.g. regulatory authority, accreditation body or certification scheme owner) or otherwise legally required.

8. Miscellaneous

- The validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired, even if any one or more provisions of these General Conditions are found to be illegal or unenforceable in any respect.
- Client shall not directly or indirectly entice, encourage or make any offer to Company's employees to leave their employment with the Company, during the course of providing the services and for a period of one year thereafter.
- Use of the Company's corporate name or registered marks for advertising purposes is not permitted without the Company's prior written authorization.

9. Governing Law, Jurisdiction and Dispute Settlement

- Unless specifically agreed otherwise, all disputes arising out or in connection with contractual relationship(s) hereunder shall be governed by the applicable laws and regulations of the Hong Kong S.A.R Region.
- Place of performance for any obligation arising out of this contract shall be Hong Kong, the Place of the TÜV SÜD Hong Kong Limited unless otherwise expressly agreed by the parties.

10. Languages

In the event of any discrepancy between the English and the Chinese version of these General Terms and Conditions, the English version shall prevail.