



**Technical Report No. 70.300.20.20913.01-00**

**Dated 2020-11-30**

Client: Yongkang Tianxin Industry and Trade Co., Ltd  
No.651, Jiuzhou West Road, Hardware & Scientific-Technical  
Industrial Area, Yongkang, Zhejiang, China

Attn : Eva

Manufacturing place: Zhejiang Tianxin Sports Equipment Co., Ltd  
No.651, Jiuzhou West Road, Hardware & Scientific-Technical  
Industrial Area, Yongkang, Zhejiang, China

Test subject: Product: Trampoline, Trampoline with safety net,  
Trampoline, Trampoline with Enclosure  
Model: TX-B7123-10FT, TX-B7123-13FT

Test specification: Refer to next pages

Purpose of examination: Test according to the test specification

Test result: See data on following pages



**Disclaimer Measurement Uncertainty:**

Unless otherwise agreed upon, Pass or Fail verdicts are given based on the measured values without any considerations of measurement uncertainties. Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO/IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as PASS nor as FAIL.

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4.

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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(China) Co., Ltd  
Shanghai Branch  
TÜV SÜD Group  
No.151 Heng Tong Road  
Shanghai, 200 070  
P.R.China



**EXECUTIVE SUMMARY:**

TEST REQUESTED		CONCLUSION	Remark
1.	Polycyclic Aromatic Hydrocarbons(PAH)content Test	Pass	-
2.	Phthalates Test	Pass	-
3.	Azo-Dye Test	Pass	-
4.	Formaldehyde Content Test	Pass	-
5.	Organotin Compounds Content Test	Pass	-
6.	Total Cadmium Content Test	Pass	-
7.	Total Lead Content Test	Pass	-
8.	Short-Chain Chlorinated Paraffins (SCCP) Test	Pass	-
9.	Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13	Pass	-
10.	Nonylphenol (NP)/ Octylphenol (OP) Content Test	Pass	-
11.	Nonylphenoethoxylates (NPEO) and Octylphenoethoxylates (OPEO) Test	Pass	-
12.	Sensory verification of odor	Pass	-
13.	pH value	Pass	-
14.	Formamide Content Test	Pass	-
15.	Dimethylformamide (DMFA) Test	Pass	-
16.	Migration of certain elements	Pass	-
17.	Flame Retardants Test	Pass	-
18.	Carcinogenic and Allergenic Disperse Dye	Pass	-
19.	Nickel Release Test	Pass	-
20.	Colour Fastness to Saliva & Sweat	Pass	-

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1. Description of the test subject





1.1 Technical Data

None

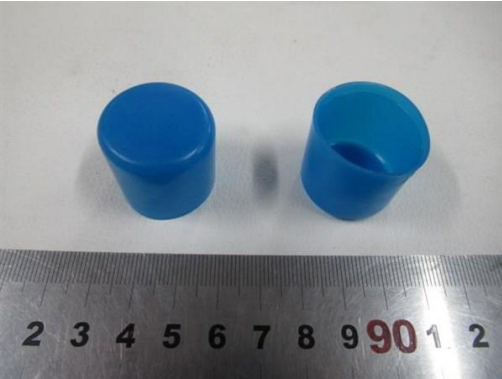
1.2. Test Item

No.	Description	Pictures	Remark
001	Blue soft plastic (back)		-
002	Black fabric (rope)		-
003	Yellow hard plastic (zipper teeth)		-




Remarks : 1. The compositing testing was required by the client  
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No.	Description	Pictures	Remark
004	Yellow fabric (zipper tape)		-
005	Red fabric rope (zipper puller)		-
006	Silvery Metal (D-ring)		-
007	Silvery Metal (ladder tube)		-

Remarks : 1. The compositing testing was required by the client  
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No.	Description	Pictures	Remark
008	Blue hard plastic (foot cap)		-
009	Black fabric (edge webbing)		-
010	Black elastic (tape)		-
011	Grey coating on metal (frame tube)		-

Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

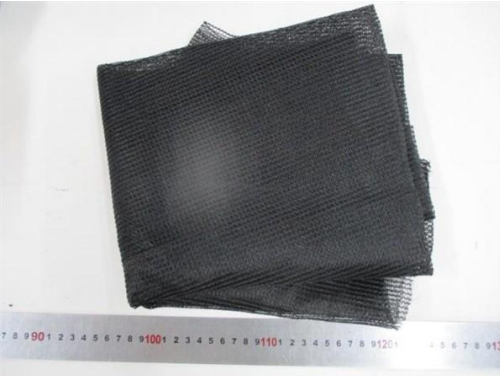
No.	Description	Pictures	Remark
012	Dark grey foam (tube)		-
013	Red coating (zipper head with metal)		-
014	Yellow fabric (webbing)		-
015	White foam (inner padding)		-

Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

No.	Description	Pictures	Remark
016	Complete sample		-
017	Black hard plastic (buckle)		-
018*	Black soft plastic (jumping mat)		-
019*	Blue soft plastic (rim cover)		-

Remarks : 1. The compositing testing was required by the client  
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No.	Description	Pictures	Remark
020*	Black soft plastic (mesh)		-



Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant





**2. Order**

**2.1 Date of Purchase Order, Customer's Reference**

2020-11-05

**2.2 Receipt of Test Sample, Location**

2020-11-06 (Sample 001~008)  
2020-10-21, 2020-10-23 (Sample 009~016)  
2020-11-10 (Sample 017)  
2020-10-26 (Sample 018\*~020\*)  
No. 1999 Duhui Road, Shanghai, P.R.China  
TÜV SÜD Certification and Testing (China) Co., Ltd.  
Shanghai Branch

**2.3 Date of Testing**

2020-11-06 to 2020-11-25 (Sample 001~008)  
2020-10-21 to 2020-10-30 (Sample 009~016)  
2020-11-10 to 2020-11-13 (Sample 017)  
2020-10-26 to 2020-11-02 (Sample 018\*~020\*)

**2.4 Location of Testing**

No. 1999 Duhui Road, Shanghai, P.R.China  
TÜV SÜD Certification and Testing (China) Co., Ltd.  
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**2.5 Points of Non-compliance or Exceptions of the Test Procedure**

None

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3. Test Results

3.1 Polycyclic Aromatic Hydrocarbons (PAH) Content Test

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1 mg/kg]

Compounds	Result [mg/kg]		
	001	002	003
Naphthalene	<0.1	<0.1	<0.1
Phenanthrene	0.2	0.2	<0.1
Anthracene	<0.1	<0.1	<0.1
Fluoranthene	<0.1	<0.1	<0.1
Pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 4 PAHs</b>	0.2	0.2	<0.1
Benzo[a]anthracene <sup>^</sup>	<0.1	<0.1	<0.1
Chrysene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[b]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[j]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[k]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[a]pyrene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[e]pyrene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[ghi]perylene	<0.1	<0.1	<0.1
dibenzo[ah]anthracene <sup>^</sup>	<0.1	<0.1	<0.1
Indeno[1,2,3-cd]pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 15 PAHs</b>	0.2	0.2	<0.1
<b>Client Claimed Category as AfPS GS Specification – Children Articles</b>	Cat. 3	Cat. 3	Cat. 2
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
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**3.1 Polycyclic Aromatic Hydrocarbons (PAH) Content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1 mg/kg]

Compounds	Result [mg/kg]		
	004	005	008
Naphthalene	0.2	<0.1	<0.1
Phenanthrene	0.2	0.2	<0.1
Anthracene	<0.1	<0.1	<0.1
Fluoranthene	<0.1	<0.1	<0.1
Pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 4 PAHs</b>	0.2	0.2	<0.1
Benzo[a]anthracene <sup>^</sup>	<0.1	<0.1	<0.1
Chrysene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[b]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[j]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[k]fluoranthene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[a]pyrene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[e]pyrene <sup>^</sup>	<0.1	<0.1	<0.1
Benzo[ghi]perylene	<0.1	<0.1	<0.1
dibenzo[ah]anthracene <sup>^</sup>	<0.1	<0.1	<0.1
Indeno[1,2,3-cd]pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 15 PAHs</b>	0.4	0.2	<0.1
<b>Client Claimed Category as AfPS GS Specification – Children Articles</b>	Cat. 2	Cat. 2	Cat. 3
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass	Pass	Pass

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**3.1 Polycyclic Aromatic Hydrocarbons (PAH) Content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1 mg/kg]

Compounds	Result [mg/kg]		
	009	010	011
Naphthalene	<0.1	<0.1	<0.1
Phenanthrene	<0.1	<0.1	<0.1
Anthracene	<0.1	<0.1	<0.1
Fluoranthene	<0.1	<0.1	<0.1
Pyrene	<0.1	0.2	0.1
<b>Sum of detected 4 PAHs</b>	<0.1	0.2	0.1
Benzo[a]anthracene^	<0.1	<0.1	<0.1
Chrysene^	<0.1	<0.1	<0.1
Benzo[b]fluoranthene^	<0.1	<0.1	<0.1
Benzo[j]fluoranthene^	<0.1	<0.1	<0.1
Benzo[k]fluoranthene^	<0.1	<0.1	<0.1
Benzo[a]pyrene^	<0.1	<0.1	<0.1
Benzo[e]pyrene^	<0.1	<0.1	<0.1
Benzo[ghi]perylene	<0.1	<0.1	<0.1
dibenzo[ah]anthracene^	<0.1	<0.1	<0.1
Indeno[1,2,3-cd]pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 15 PAHs</b>	<0.1	0.2	0.1
<b>Client Claimed Category as AfPS GS Specification – Children Articles</b>	Cat. 3	Cat. 3	Cat. 3
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
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**3.1 Polycyclic Aromatic Hydrocarbons (PAH) Content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1 mg/kg]

Compounds	Result [mg/kg]		
	012	013	014
Naphthalene	<0.1	0.7	<0.1
Phenanthrene	<0.1	<0.1	<0.1
Anthracene	<0.1	<0.1	<0.1
Fluoranthene	<0.1	<0.1	<0.1
Pyrene	0.5	<0.1	<0.1
<b>Sum of detected 4 PAHs</b>	0.5	<0.1	<0.1
Benzo[a]anthracene^	<0.1	<0.1	<0.1
Chrysene^	<0.1	<0.1	<0.1
Benzo[b]fluoranthene^	<0.1	<0.1	<0.1
Benzo[j]fluoranthene^	<0.1	<0.1	<0.1
Benzo[k]fluoranthene^	<0.1	<0.1	<0.1
Benzo[a]pyrene^	<0.1	<0.1	<0.1
Benzo[e]pyrene^	<0.1	<0.1	<0.1
Benzo[ghi]perylene	<0.1	<0.1	<0.1
dibenzo[ah]anthracene^	<0.1	<0.1	<0.1
Indeno[1,2,3-cd]pyrene	<0.1	<0.1	<0.1
<b>Sum of detected 15 PAHs</b>	0.5	0.7	<0.1
<b>Client Claimed Category as AfPS GS Specification – Children Articles</b>	Cat. 2	Cat. 2	Cat. 2
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass	Pass	Pass

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**3.1 Polycyclic Aromatic Hydrocarbons(PAH)content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1mg/kg]

Compounds	Result [mg/kg]
Naphthalene	<0.1
Phenanthrene	0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
<b>Sum of detected 4 PAHs</b>	0.1
Benzo[a]anthracene^	<0.1
Chrysene^	<0.1
Benzo[b]fluoranthene^	<0.1
Benzo[j]fluoranthene^	<0.1
Benzo[k]fluoranthene^	<0.1
Benzo[a]pyrene^	<0.1
Benzo[e]pyrene^	<0.1
Benzo[ghi]perylene	<0.1
dibenzo[ah]anthracene^	<0.1
Indeno[1,2,3-cd]pyrene	<0.1
<b>Sum of detected 15 PAHs</b>	0.1
<b>Client Claimed Category as AfPS GS Specification –Children Articles</b>	Cat. 2
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass

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**3.1 Polycyclic Aromatic Hydrocarbons(PAH)content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1mg/kg]

Compounds	Result [mg/kg]
	<b>018*</b>
Naphthalene	0.1
Phenanthrene	0.2
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
<b>Sum of detected 4 PAHs</b>	0.2
Benzo[a]anthracene^	<0.1
Chrysene^	<0.1
Benzo[b]fluoranthene^	<0.1
Benzo[j]fluoranthene^	<0.1
Benzo[k]fluoranthene^	<0.1
Benzo[a]pyrene^	<0.1
Benzo[e]pyrene^	<0.1
Benzo[ghi]perylene	<0.1
dibenzo[ah]anthracene^	<0.1
Indeno[1,2,3-cd]pyrene	<0.1
<b>Sum of detected 15 PAHs</b>	0.3
<b>Client Claimed Category as AfPS GS Specification</b>	Cat. 1
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass

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**3.1 Polycyclic Aromatic Hydrocarbons(PAH)content Test**

Test according to German Committee on Product Safety (AfPS)

AfPS GS 2019:01 PAK Solvent extraction followed by GC-MS analysis

[Reporting Limit = 0.1mg/kg]

Compounds	Result [mg/kg]			
	019*		020*	
Naphthalene	0.5		0.3	
			<0.1	
Phenanthrene	0.3		0.4	
Anthracene	<0.1		1.5	
Fluoranthene	<0.1		2.2	
Pyrene	<0.1		<0.1	
<b>Sum of detected 4 PAHs</b>	0.3		<0.1	
Benzo[a]anthracene^	<0.1		<0.1	
Chrysene^	<0.1		<0.1	
Benzo[b]fluoranthene^	<0.1		<0.1	
Benzo[j]fluoranthene^	<0.1		<0.1	
Benzo[k]fluoranthene^	<0.1		<0.1	
Benzo[a]pyrene^	<0.1		0.1	
Benzo[e]pyrene^	<0.1		<0.1	
Benzo[ghi]perylene	<0.1		<0.1	
dibenzo[ah]anthracene^	<0.1		2.3	
Indeno[1,2,3-cd]pyrene	<0.1		<0.1	
<b>Sum of detected 15 PAHs</b>	0.8		0.1	
<b>Category as AfPS GS Specification – Children Articles</b>	Cat. 2	Cat. 3	Cat. 2	Cat. 3
<b>Conclusion<sup>4</sup> (AfPS GS Specification)</b>	Pass	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
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- Note:
1. "<" denotes less than
  2. "mg/kg" denotes milligram per kilogram
  3. "A" denotes PAHs in Regulation (EC) No. 1272/2013 (REACH) Annex XVII, Entry 50
  4. Limit:

Parameter (mg/kg)	Category 1 Materials intended to be placed in the mouth, or materials coming into long-term contact with skin (more than 30s) during the intended use - in toys according to Directive 2009/48/EC or - for the use by children <sup>a,b</sup> up to 3 years of age	Category 2 Materials not covered by category 1, coming into long-term contact (more than 30s) or short-term repetitive contact <sup>c</sup> with skin during the intended or foreseeable use <sup>d</sup>		Category 3 Materials covered neither by category 1 nor 2, coming into short-term skin contact (up to 30s) with skin during the intended or foreseeable use	
		a. Used by children	b. Other consumer products	a. Used by children	b. Other consumer products
-	-				
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[ghi]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-cd]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 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

- A "child" is legally defined as a person before reaching the age of 14 years.
- Use by children includes both active and passive direct contact by children.
- Definition "short-term repetitive contact" taken from REACH Annex XVII entry 50 amendment (Regulation (EC) No.1272/2013).
- According to the definition of the Product Safety Act (ProdSG) (Chapter 1 Article 2 No. 28) "foreseeable use" shall mean the use of a product in a manner that the person placing it on the market, has not intended, but which could be reasonably foreseeable.

5. REACH Regulation (EC) No. 1907/2006 Annex XVII Entry 50, Amendment of Commission Regulation (EU) No. 1272/2013 for toys.

Parameter (mg/kg)	Toys (including activity toys): Childcare articles	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
Benzo[a]anthracene, Chrysene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Benzo[e]pyrene, dibenzo[ah]anthracene, Benzo[j]fluoranthene	Each < 0.5	Each < 1.0

Remarks : 1. The compositing testing was required by the client  
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**3.2 Phthalates Test**

**3.2.1** In house method, solvent extraction by ultrasonic bath, determination by GC/MS  
 [Reporting Limit: 0.005 %]

Parameter	CAS No.	Results [%]			Client Limit [%]
		001	003	008	
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	<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-octyl phthalate, (DNOP)	117-84-0	<0.005	<0.005	<0.005	<0.1
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
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.005	<0.005	<0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	<0.005	<0.005	<0.005	<0.1
Dipentyl phthalate (DPP)	131-18-0	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C6-8- branched alkyl esters,C7-rich (DIHP)	71888-89-6	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	<0.005	<0.005	<0.005	<0.1
Diisopentyl phthalate (DiPP)	605-50-5	<0.005	<0.005	<0.005	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	<0.005	<0.005	<0.005	<0.1
n-Pentyl-isopentylphthalate (nPiPP)	776297-69-9	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid,dipentylester branched and linear (DPP)	84777-06-0	<0.005	<0.005	<0.005	<0.1
Di-n-hexyl phthalate (DHP)	84-75-3	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	<0.005	<0.005	<0.005	<0.1
1,2-benzenedicarboxylic acid,di-C6-10- alkyl esters;1,2-benzenedicarboxylic acid,mixed decyl and hexyl and octyl diesters with≥0.3%of dihexyl phthalate	68515-51-5, 68648-93-1	<0.005	<0.005	<0.005	<0.1
Dipropylheptyl phthalate(DPHP)	53306-54-0	<0.005	<0.005	<0.005	<0.1
Di-iso-hexyl phthalate,DiHxP	71850-09-4	<0.005	<0.005	<0.005	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note: 1. “%” denotes percentage by weight  
 2. “<” denotes less than

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.2 Phthalates Test**

**3.2.1** In house method, solvent extraction by ultrasonic bath, determination by GC/MS  
 [Reporting Limit: 0.005 %]

Parameter	CAS No.	Results [%]			Client Limit [%]
		010	011	012	
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	<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-octyl phthalate, (DNOP)	117-84-0	<0.005	<0.005	<0.005	<0.1
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
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.005	<0.005	<0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	<0.005	<0.005	<0.005	<0.1
Dipentyl phthalate (DPP)	131-18-0	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C6-8- branched alkyl esters,C7-rich (DIHP)	71888-89-6	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	<0.005	<0.005	<0.005	<0.1
Diisopentyl phthalate (DiPP)	605-50-5	<0.005	<0.005	<0.005	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	<0.005	<0.005	<0.005	<0.1
n-Pentyl-isopentylphthalate (nPiPP)	776297-69-9	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid,dipentylester branched and linear (DPP)	84777-06-0	<0.005	<0.005	<0.005	<0.1
Di-n-hexyl phthalate (DHP)	84-75-3	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	<0.005	<0.005	<0.005	<0.1
1,2-benzenedicarboxylic acid,di-C6-10- alkyl esters;1,2-benzenedicarboxylic acid,mixed decyl and hexyl and octyl diesters with≥0.3%of dihexyl phthalate	68515-51-5, 68648-93-1	<0.005	<0.005	<0.005	<0.1
Dipropylheptyl phthalate(DPHP)	53306-54-0	<0.005	<0.005	<0.005	<0.1
Di-iso-hexyl phthalate,DiHxP	71850-09-4	<0.005	<0.005	<0.005	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note: 1. “%” denotes percentage by weight  
 2. “<” denotes less than

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.2 Phthalates Test**

**3.2.1** In house method, solvent extraction by ultrasonic bath, determination by GC/MS  
 [Reporting Limit: 0.005 %]

Parameter	CAS No.	Results [%]		Client Limit [%]
		013	015	
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	<0.005	<0.005	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	<0.005	<0.005	<0.1
Di-n-octyl phthalate, (DNOP)	117-84-0	<0.005	<0.005	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	<0.005	<0.005	<0.1
Dibutyl phthalate, (DBP)	84-74-2	<0.005	<0.005	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	<0.005	<0.005	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.005	<0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	<0.005	<0.005	<0.1
Dipentyl phthalate (DPP)	131-18-0	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	<0.005	<0.005	<0.1
Diisopentyl phthalate (DiPP)	605-50-5	<0.005	<0.005	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	<0.005	<0.005	<0.1
n-Pentyl-isopentylphthalate (nPiPP)	776297-69-9	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dipentylester branched and linear (DPP)	84777-06-0	<0.005	<0.005	<0.1
Di-n-hexyl phthalate (DHP)	84-75-3	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	<0.005	<0.005	<0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5, 68648-93-1	<0.005	<0.005	<0.1
Dipropylheptyl phthalate (DPHP)	53306-54-0	<0.005	<0.005	<0.1
Di-iso-hexyl phthalate, DiHxP	71850-09-4	<0.005	<0.005	<0.1
<b>Conclusion</b>		Pass	Pass	-

Note: 1. “%” denotes percentage by weight  
 2. “<” denotes less than

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.2 Phthalates Test**

**3.2.1** In house method, solvent extraction by ultrasonic bath, determination by GC/MS  
 [Reporting Limit: 0.005 %]

Parameter	CAS No.	Results [%]			Client Limit [%]
		018*	019*	020*	
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	<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-octyl phthalate, (DNOP)	117-84-0	<0.005	<0.005	<0.005	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	<0.005	0.028	<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
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.005	<0.005	<0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	<0.005	<0.005	<0.005	<0.1
Dipentyl phthalate (DPP)	131-18-0	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C6-8- branched alkyl esters,C7-rich (DIHP)	71888-89-6	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	<0.005	<0.005	<0.005	<0.1
Diisopentyl phthalate (DiPP)	605-50-5	<0.005	<0.005	<0.005	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	<0.005	<0.005	<0.005	<0.1
n-Pentyl-isopentylphthalate (nPiPP)	776297-69-9	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid,dipentylester branched and linear (DPP)	84777-06-0	<0.005	<0.005	<0.005	<0.1
Di-n-hexyl phthalate (DHP)	84-75-3	<0.005	<0.005	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	<0.005	<0.005	<0.005	<0.1
1,2-benzenedicarboxylic acid,di-C6-10- alkyl esters;1,2-benzenedicarboxylic acid,mixed decyl and hexyl and octyl diesters with≥0.3%of dihexyl phthalate	68515-51-5, 68648-93-1	<0.005	<0.005	<0.005	<0.1
Dipropylheptyl phthalate(DPHP)	53306-54-0	<0.005	<0.005	<0.005	<0.1
Di-iso-hexyl phthalate,DiHxP	71850-09-4	<0.005	<0.005	<0.005	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note: 1. “%” denotes percentage by weight  
 2. “<” denotes less than

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.2 Phthalates Test**

**3.2.2** Regulation (EC) No. 1907/2006 Annex XVII Item No. 51 with amendment Regulation (EU) No. 2018/2005 & Regulation (EC) No. 1907/2006 Annex XVII Item No. 52

ISO 14389:2014

[Reporting Limit = 0.005 %]

**A. For all articles**

Parameter	CAS no.	Result [%]	Maximum Allowable Limit [%]
		017	
Diisobutylphthalate (DIBP)	84-69-5	<0.005	-
Dibutyl phthalate (DBP)	84-74-2	<0.005	-
Butyl benzyl phthalate (BBP)	85-68-7	<0.005	-
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	<0.005	-
<b>Sum</b>	-	<0.005	<0.1
<b>Conclusion</b>	-	Pass	-

**B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)**

Parameter	CAS no.	Result [%]	Maximum Allowable Limit [%]
		017	
Di-n-octyl phthalate (DNOP)	117-84-0	<0.005	-
Di-iso-decyl phthalate (DIDP)	26761-40-0	<0.005	-
Di-iso-nonyl phthalate (DINP)	28553-12-0	<0.005	-
<b>Sum</b>	-	<0.005	<0.1
<b>Conclusion</b>	-	Pass	-

- Note:
1. “%” denotes percentage by weight
  2. “<” denotes less than

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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Date: 2020-11-30

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### 3.3 Azo-Dye Test

Test with reference to EN ISO 14362-1:2017

[Reporting Limit = 5.0 mg/kg].

Parameter	CAS-No	Result [mg/kg]			Client Limit [mg/kg]
		002	004	005	
4-aminobiphenyl	92-67-1	<5.0	<5.0	<5.0	≤30
Benzidine	92-87-5	<5.0	<5.0	<5.0	≤30
4-chloro-o-toluidine	95-69-2	<5.0	<5.0	<5.0	≤30
2-naphthylamine	91-59-8	<5.0	<5.0	<5.0	≤30
o-aminoazotoluene	97-56-3	<5.0	<5.0	<5.0	≤30
5-nitro-o-toluidine	99-55-8	<5.0	<5.0	<5.0	≤30
4-chloroaniline	106-47-8	<5.0	<5.0	<5.0	≤30
2,4-diaminoanisole	615-05-4	<5.0	<5.0	<5.0	≤30
4,4'-diaminodiphenylmethane	101-77-9	<5.0	<5.0	<5.0	≤30
3,3'-dichlorobenzidine	91-94-1	<5.0	<5.0	<5.0	≤30
3,3'-Dimethoxybenzidine	119-90-4	<5.0	<5.0	<5.0	≤30
3,3'-dimethylbenzidine	119-93-7	<5.0	<5.0	<5.0	≤30
4,4'-methylenedi-o-toluidine	838-88-0	<5.0	<5.0	<5.0	≤30
p-cresidine	120-71-8	<5.0	<5.0	<5.0	≤30
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	<5.0	<5.0	<5.0	≤30
4,4'-oxydianiline	101-80-4	<5.0	<5.0	<5.0	≤30
4,4'-thiodianiline	139-65-1	<5.0	<5.0	<5.0	≤30
o-toluidine	95-53-4	<5.0	<5.0	<5.0	≤30
2,4-toluediamine	95-80-7	<5.0	<5.0	<5.0	≤30
2,4,5-trimethylaniline	137-17-7	<5.0	<5.0	<5.0	≤30
2-methoxyaniline	90-04-0	<5.0	<5.0	<5.0	≤30
2,4-xylidine	95-68-1	<5.0	<5.0	<5.0	≤30
2,6-xylidine	87-62-7	<5.0	<5.0	<5.0	≤30
4-aminoazobenzene	60-09-3	<5.0	<5.0	<5.0	≤30
<b>Test Method</b>		EN ISO 14362-1:2017			-
<b>Conclusion</b>		Pass	Pass	Pass	-

Remark: 1. "<" denotes less than, "≤" denotes not more than  
 2. "mg/kg" denotes milligram per kilogram

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

### 3.3 Azo-Dye Test

Test with reference to EN ISO 14362-1:2017

[Reporting Limit = 5.0 mg/kg].

Parameter	CAS-No	Result [mg/kg]			Client Limit [mg/kg]
		010	014	020*	
4-aminobiphenyl	92-67-1	<5.0	<5.0	<5.0	≤30
Benzidine	92-87-5	<5.0	<5.0	<5.0	≤30
4-chloro-o-toluidine	95-69-2	<5.0	<5.0	<5.0	≤30
2-naphthylamine	91-59-8	<5.0	<5.0	<5.0	≤30
o-aminoazotoluene	97-56-3	<5.0	<5.0	<5.0	≤30
5-nitro-o-toluidine	99-55-8	<5.0	<5.0	<5.0	≤30
4-chloroaniline	106-47-8	<5.0	<5.0	<5.0	≤30
2,4-diaminoanisole	615-05-4	<5.0	<5.0	<5.0	≤30
4,4'-diaminodiphenylmethane	101-77-9	<5.0	<5.0	<5.0	≤30
3,3'-dichlorobenzidine	91-94-1	<5.0	<5.0	<5.0	≤30
3,3'-Dimethoxybenzidine	119-90-4	<5.0	<5.0	<5.0	≤30
3,3'-dimethylbenzidine	119-93-7	<5.0	<5.0	<5.0	≤30
4,4'-methylenedi-o-toluidine	838-88-0	<5.0	<5.0	<5.0	≤30
p-cresidine	120-71-8	<5.0	<5.0	<5.0	≤30
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	<5.0	<5.0	<5.0	≤30
4,4'-oxydianiline	101-80-4	<5.0	<5.0	<5.0	≤30
4,4'-thiodianiline	139-65-1	<5.0	<5.0	<5.0	≤30
o-toluidine	95-53-4	<5.0	<5.0	<5.0	≤30
2,4-toluediamine	95-80-7	<5.0	<5.0	<5.0	≤30
2,4,5-trimethylaniline	137-17-7	<5.0	<5.0	<5.0	≤30
2-methoxyaniline	90-04-0	<5.0	<5.0	<5.0	≤30
2,4-xylidine	95-68-1	<5.0	<5.0	<5.0	≤30
2,6-xylidine	87-62-7	<5.0	<5.0	<5.0	≤30
4-aminoazobenzene	60-09-3	<5.0	<5.0	<5.0	≤30
<b>Test Method</b>		EN ISO 14362-1:2017			-
<b>Conclusion</b>		Pass	Pass	Pass	-

Remark: 1. "<" denotes less than, "≤" denotes not more than  
 2. "mg/kg" denotes milligram per kilogram

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



### 3.3 Azo-Dye Test

Test in accordance with EN 14362-1:2012 (for textiles)  
[Reporting Limit = 5.0 mg/kg].

Parameter	CAS-No	Result [mg/kg]			Client Limit [mg/kg]
		002	004	005	
4-aminobiphenyl	92-67-1	<5.0	<5.0	<5.0	<20
Benzidine	92-87-5	<5.0	<5.0	<5.0	<20
4-chloro-o-toluidine	95-69-2	<5.0	<5.0	<5.0	<20
2-naphthylamine	91-59-8	<5.0	<5.0	<5.0	<20
o-aminoazotoluene	97-56-3	<5.0	<5.0	<5.0	<20
5-nitro-o-toluidine	99-55-8	<5.0	<5.0	<5.0	<20
4-chloroaniline	106-47-8	<5.0	<5.0	<5.0	<20
2,4-diaminoanisole	615-05-4	<5.0	<5.0	<5.0	<20
4,4'-diaminodiphenylmethane	101-77-9	<5.0	<5.0	<5.0	<20
3,3'-dichlorobenzidine	91-94-1	<5.0	<5.0	<5.0	<20
3,3'-Dimethoxybenzidine	119-90-4	<5.0	<5.0	<5.0	<20
3,3'-dimethylbenzidine	119-93-7	<5.0	<5.0	<5.0	<20
4,4'-methylenedi-o-toluidine	838-88-0	<5.0	<5.0	<5.0	<20
p-cresidine	120-71-8	<5.0	<5.0	<5.0	<20
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	<5.0	<5.0	<5.0	<20
4,4'-oxydianiline	101-80-4	<5.0	<5.0	<5.0	<20
4,4'-thiodianiline	139-65-1	<5.0	<5.0	<5.0	<20
o-toluidine	95-53-4	<5.0	<5.0	<5.0	<20
2,4-toluediamine	95-80-7	<5.0	<5.0	<5.0	<20
2,4,5-trimethylaniline	137-17-7	<5.0	<5.0	<5.0	<20
2-methoxyaniline	90-04-0	<5.0	<5.0	<5.0	<20
2,4-xylidine	95-68-1	<5.0	<5.0	<5.0	<20
2,6-xylidine	87-62-7	<5.0	<5.0	<5.0	<20
4-aminoazobenzene	60-09-3	<5.0	<5.0	<5.0	<20
aniline	62-53-3	<5.0	<5.0	<5.0	<100
<b>Test Method</b>		EN 14362-1:2012			-
<b>Conclusion</b>		Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

Project No.: 70.300.20.20913.01-00

Date: 2020-11-30

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### 3.3 Azo-Dye Test

Test in accordance with EN 14362-1:2012 (for textiles)  
[Reporting Limit = 5.0 mg/kg].

Parameter	CAS-No	Result [mg/kg]		Client Limit [mg/kg]
		009	020*	
4-aminobiphenyl	92-67-1	<5.0	<5.0	<20
Benzidine	92-87-5	<5.0	<5.0	<20
4-chloro-o-toluidine	95-69-2	<5.0	<5.0	<20
2-naphthylamine	91-59-8	<5.0	<5.0	<20
o-aminoazotoluene	97-56-3	<5.0	<5.0	<20
5-nitro-o-toluidine	99-55-8	<5.0	<5.0	<20
4-chloroaniline	106-47-8	<5.0	<5.0	<20
2,4-diaminoanisole	615-05-4	<5.0	<5.0	<20
4,4'-diaminodiphenylmethane	101-77-9	<5.0	<5.0	<20
3,3'-dichlorobenzidine	91-94-1	<5.0	<5.0	<20
3,3'-Dimethoxybenzidine	119-90-4	<5.0	<5.0	<20
3,3'-dimethylbenzidine	119-93-7	<5.0	<5.0	<20
4,4'-methylenedi-o-toluidine	838-88-0	<5.0	<5.0	<20
p-cresidine	120-71-8	<5.0	<5.0	<20
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	<5.0	<5.0	<20
4,4'-oxydianiline	101-80-4	<5.0	<5.0	<20
4,4'-thiodianiline	139-65-1	<5.0	<5.0	<20
o-toluidine	95-53-4	<5.0	<5.0	<20
2,4-toluediamine	95-80-7	<5.0	<5.0	<20
2,4,5-trimethylaniline	137-17-7	<5.0	<5.0	<20
2-methoxyaniline	90-04-0	<5.0	<5.0	<20
2,4-xylidine	95-68-1	<5.0	<5.0	<20
2,6-xylidine	87-62-7	<5.0	<5.0	<20
4-aminoazobenzene	60-09-3	<5.0	<5.0	<20
aniline	62-53-3	<5.0	<5.0	<100
<b>Test Method</b>		EN 14362-1:2012		-
<b>Conclusion</b>		Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.4 Formaldehyde Content Test**

Formaldehyde content determined by UV-Visible spectroscopy and/or HPLC-DAD.

ISO 14184-1:2011.

[Reporting Limit = 16 mg/kg]

Test Item	Result [mg/kg]	Client Limit [mg/kg]	Conclusion
002	<16	< 50	Pass
004	<16	< 50	Pass
005	<16	< 50	Pass
009	<16	< 50	Pass
010	<16	< 50	Pass
014	<16	< 50	Pass
020*	<16	< 50	Pass

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



Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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**3.5 Organotin Compounds Content Test**

ISO 16179:2012

[Reporting Limit = 0.025 mg/kg]

Organotin	Tested item [mg/kg]			Client's Limit [mg/kg]
	003	004	005	
MMT	<0.025	<0.025	<0.025	≤1.0
DMT	<0.025	<0.025	<0.025	≤1.0
MBT	<0.025	<0.025	<0.025	≤1.0
DBT	<0.025	<0.025	<0.025	≤1.0
TeBT(TTBT)	<0.025	<0.025	<0.025	≤1.0
DprT	<0.025	<0.025	<0.025	≤1.0
MOT	<0.025	<0.025	<0.025	≤1.0
DOT	<0.025	<0.025	<0.025	≤1.0
TcyT	<0.025	<0.025	<0.025	≤1.0
DPhT	<0.025	<0.025	<0.025	≤1.0
TPhT	<0.025	<0.025	<0.025	≤1.0
TBT	<0.025	<0.025	<0.025	≤0.5
<b>Conclusion</b>	Pass	Pass	Pass	-

Organotin	Tested item [mg/kg]			Client's Limit [mg/kg]
	012	013	014	
MMT	<0.025	<0.025	<0.025	≤1.0
DMT	<0.025	<0.025	<0.025	≤1.0
MBT	<0.025	<0.025	<0.025	≤1.0
DBT	<0.025	<0.025	<0.025	≤1.0
TeBT(TTBT)	<0.025	<0.025	<0.025	≤1.0
DprT	<0.025	<0.025	<0.025	≤1.0
MOT	<0.025	<0.025	<0.025	≤1.0
DOT	<0.025	<0.025	<0.025	≤1.0
TcyT	<0.025	<0.025	<0.025	≤1.0
DPhT	<0.025	<0.025	<0.025	≤1.0
TPhT	<0.025	<0.025	<0.025	≤1.0
TBT	<0.025	<0.025	<0.025	≤0.5
<b>Conclusion</b>	Pass	Pass	Pass	-

- Note:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than, "≤" denotes not more than

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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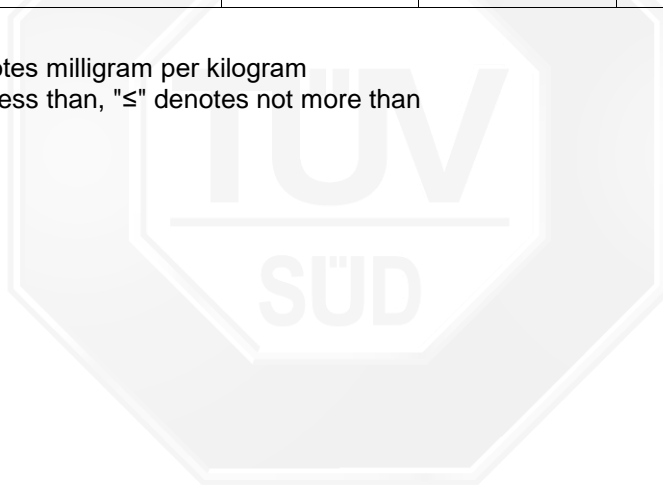
**3.5 Organotin Compounds Content Test**

ISO 16179:2012

[Reporting Limit = 0.025 mg/kg]

Organotin	Tested item [mg/kg]			Client's Limit [mg/kg]
	018*	019*	020*	
MMT	<0.025	<0.025	<0.025	≤1.0
DMT	<0.025	<0.025	<0.025	≤1.0
MBT	<0.025	<0.025	<0.025	≤1.0
DBT	<0.025	<0.025	<0.025	≤1.0
TeBT(TTBT)	<0.025	<0.025	<0.025	≤1.0
DprT	<0.025	<0.025	<0.025	≤1.0
MOT	<0.025	<0.025	<0.025	≤1.0
DOT	<0.025	<0.025	<0.025	≤1.0
TcyT	<0.025	<0.025	<0.025	≤1.0
DPhT	<0.025	<0.025	<0.025	≤1.0
TPhT	<0.025	<0.025	<0.025	≤1.0
TBT	<0.025	<0.025	<0.025	≤0.5
<b>Conclusion</b>	Pass	Pass	Pass	-

- Note:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than, "≤" denotes not more than



Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.6 Total Cadmium Content Test**

EN 1122:2001 Method B and followed by Atomic Absorption Spectrophotometer (AAS) or Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES)

[Reporting Limit = 10.0 mg/kg]

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	001	002	003	
Cadmium	<10.0	<10.0	<10.0	<40
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	004	005	008	
Cadmium	<10.0	<10.0	<10.0	<40
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	009	010	011	
Cadmium	<10.0	<10.0	<10.0	<40
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	012	013	015	
Cadmium	<10.0	<10.0	<10.0	<40
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	017	018*	019*	
Cadmium	<10.0	<10.0	<10.0	<40
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	020*			
Cadmium	<10.0			<40
<b>Conclusion</b>	Pass			-

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

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.7 Total Lead Content Test**

Acid Digestion and detection with Atomic Absorption Spectrophotometer (AAS) or Inductively Coupled Plasma Optical Emission Spectrophotometer (ICP-OES)

[Reporting Limit: 10.0 mg/kg]

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	001	002	003	
Lead	<10.0	<10.0	<10.0	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	004	005	008	
Lead	<10.0	<10.0	<10.0	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	010	011	012	
Lead	<10.0	<10.0	<10.0	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	013	015	017	
Lead	<10.0	<10.0	<10.0	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Compounds	Tested item [mg/kg]			Client Limit [mg/kg]
	018*	019*	020*	
Lead	18.7	<10.0	56.2	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.8 Short-Chain Chlorinated Paraffins (SCCP) Test**

Solvent extraction, GC-NCI analysis

[Reporting Limit = 100 mg/kg]

Test Item(s)	Result [mg/kg]	Client Limit [mg/kg]	Conclusion
001	<100	<1000	Pass
010	<100	<1000	Pass
011	<100	<1000	Pass
012	<100	<1000	Pass
013	<100	<1000	Pass
015	<100	<1000	Pass
018*	<100	<1000	Pass
019*	<100	<1000	Pass
020*	<100	<1000	Pass

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



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant





**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			001	002	003
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	Combined<0.053	Combined<0.053	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053			
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant



**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			004	005	006
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	<5	Combined<0.053	<5
Chromium VI (Cr VI)	mg/kg	0.053	<0.053		<0.053
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			007	008	009
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	<5	Combined<0.053	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053	<0.053		
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant



**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			010	011	012
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	<5	<5	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053	<0.053	<0.053	
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			013	014	015
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	<5	Combined<0.053	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053	<0.053		
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant



**3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13**

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result		
			017	018*	019*
<b>Category</b>	-	<b>III</b>	<b>III</b>	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500	<1500	<1500
Aluminium (Al)	mg/kg	70000	<7000	<7000	<7000
Chromium III (Cr III)	mg/kg	460	Combined<0.053	Combined<0.053	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053			
Manganese (Mn)	mg/kg	15000	<1500	<1500	<1500
Cobalt (Co)	mg/kg	130	<5	<5	<5
Nickel (Ni)	mg/kg	930	<93	<93	<93
Copper (Cu)	mg/kg	7700	<770	<770	<770
Zinc (Zn)	mg/kg	46000	<4600	<4600	<4600
Arsenic (As)	mg/kg	47	<5	<5	<5
Selenium (Se)	mg/kg	460	<46	<46	<46
Strontium (Sr)	mg/kg	56000	<5600	<5600	<5600
Cadmium (Cd)	mg/kg	17	<5	<5	<5
Tin (Sn)	mg/kg	180000	<18000	<18000	<18000
Organic tin	mg/kg	12	<12*	<12*	<12*
Antimony (Sb)	mg/kg	560	<5	<5	<5
Barium (Ba)	mg/kg	18750	<1875	<1875	<1875
Mercury (Hg)	mg/kg	94	<5	<5	<5
Lead (Pb)	mg/kg	23	<5	<5	<5
<b>Conclusion</b>	-	-	Pass	Pass	Pass

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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3.9 Migration of Certain Elements - European Council Directive 2009/48/EC, Annex II, Part III, Point 13

Test with reference to EN 71-3:2019

<b>Category I</b>	<b>Dry, brittle, powder-like or pliable toy material</b>
<b>Category II</b>	<b>Liquid or sticky toy material</b>
<b>Category III</b>	<b>Scraped-off toy material</b>

Test Item(s)	Unit	Req.	Result
			020*
<b>Category</b>	-	<b>III</b>	<b>III</b>
Boron (B)	mg/kg	15000	<1500
Aluminium (Al)	mg/kg	70000	<7000
Chromium III (Cr III)	mg/kg	460	Combined<0.053
Chromium VI (Cr VI)	mg/kg	0.053	
Manganese (Mn)	mg/kg	15000	<1500
Cobalt (Co)	mg/kg	130	<5
Nickel (Ni)	mg/kg	930	<93
Copper (Cu)	mg/kg	7700	<770
Zinc (Zn)	mg/kg	46000	<4600
Arsenic (As)	mg/kg	47	<5
Selenium (Se)	mg/kg	460	<46
Strontium (Sr)	mg/kg	56000	<5600
Cadmium (Cd)	mg/kg	17	<5
Tin (Sn)	mg/kg	180000	<18000
Organic tin	mg/kg	12	<12*
Antimony (Sb)	mg/kg	560	<5
Barium (Ba)	mg/kg	18750	<1875
Mercury (Hg)	mg/kg	94	<5
Lead (Pb)	mg/kg	23	<5
<b>Conclusion</b>	-	-	Pass

Note: “<” = Less than  
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million

- Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content.
  - If combined Cr content exceeds 0.02mg/kg in I mat., 0.005 mg/kg in II mat., or 0.053mg/kg in III mat., confirmation Cr(VI) by UV-VIS Spectrometry, Cr(III)=Combined Cr – Cr(VI).
  - Result(s) of organic tin was (were) reported as soluble tin content.
  - \*The report limit of OT is reported by soluble tin screening.
  - The composting testing was required by the client
  - The test items were specified by the applicant

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



Comment :

Proposed by SCHEER			
-	Category I	Category II	Category III
<b>Element(s)</b>	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)
<b>Current</b>	5625 mg/kg	1406 mg/kg	70000 mg/kg
<b>Proposed<sup>[a]</sup></b>	2250 mg/kg	560 mg/kg	28130 mg/kg
<sup>[a]</sup> denotes as these maximum allowable limits apply from May 20th, 2021 according to European Council Directive (EU) 2019/1922 November 19th, 2019 amending, for the purpose of adopting to technical, progress, Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards aluminum.			



Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant





**3.10 Nonylphenol (NP)/ Octylphenol (OP) Content Test**

ISO 18254

[Reporting Limit = 10 mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	003	004	005	
Nonyl phenol (NP)	<10	<10	<10	<100
Octyl phenol (OP)	<10	<10	<10	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

Items	Results [mg/kg]			Client Limit [mg/kg]
	012	013	014	
Nonyl phenol (NP)	<10	<10	<10	<100
Octyl phenol (OP)	<10	<10	<10	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

Items	Results [mg/kg]			Client Limit [mg/kg]
	018*	019*	020*	
Nonyl phenol (NP)	<10	<10	<10	<100
Octyl phenol (OP)	<10	<10	<10	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.11 Nonylphenol Ethoxylates (NPEO)/ Octylphenol Ethoxylates (OPEO) Content Test**

ISO 18254

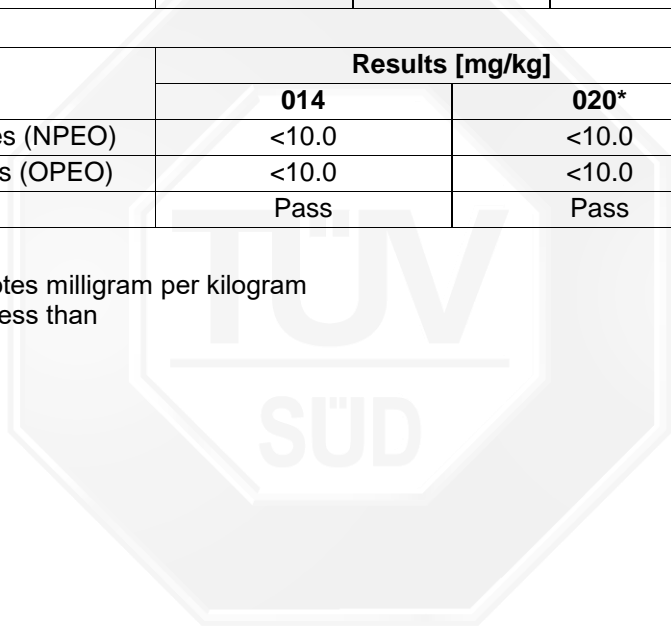
[Reporting Limit = 10.0 mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	002	003	004	
Nonylphenoethoxylates (NPEO)	<10.0	<10.0	<10.0	<1000
Octylphenoethoxylates (OPEO)	<10.0	<10.0	<10.0	<1000
<b>Conclusion</b>	Pass	Pass	Pass	-

Items	Results [mg/kg]			Client Limit [mg/kg]
	005	009	010	
Nonylphenoethoxylates (NPEO)	<10.0	<10.0	<10.0	<1000
Octylphenoethoxylates (OPEO)	<10.0	<10.0	<10.0	<1000
<b>Conclusion</b>	Pass	Pass	Pass	-

Items	Results [mg/kg]		Client Limit [mg/kg]
	014	020*	
Nonylphenoethoxylates (NPEO)	<10.0	<10.0	<1000
Octylphenoethoxylates (OPEO)	<10.0	<10.0	<1000
<b>Conclusion</b>	Pass	Pass	-

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



Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant



**3.12 Sensory verification of odor**

Client's specification with reference to SNV 195651

Items	Results [Score]	Client Limit [Score]
	016	
Average Value	1.0	≤3
<b>Conclusion</b>	Pass	-

Note: Scoring  
 1 = Odourless  
 2 = Weak odour  
 3 = Tolerable odour  
 4 = Annoying odour  
 5 = Intolerable odour  
 “<=” denotes less than or equal to

**3.13 pH Value**

ISO 3071:2005

Items	Results [pH]			Client Limit [pH]
	004	005	008	
pH (mean value)	7.23	6.89	6.31	4.0~7.5
<b>Conclusion</b>	Pass	Pass	Pass	-

Items	Results [pH]		Client Limit [pH]
	014	020*	
pH (mean value)	6.14	6.46	4.0~7.5
<b>Conclusion</b>	Pass	Pass	-

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.14 Formamide Content Test**

Ultrasonic extraction by methanol, qualitatively and quantitatively analyzed by GC-MS  
 [Reporting Limit = 10 mg/kg]

Items	Results [mg/kg]		Client Limit [mg/kg]
	012	015	
Formamide	<10	<10	<30
<b>Conclusion</b>	Pass	Pass	-

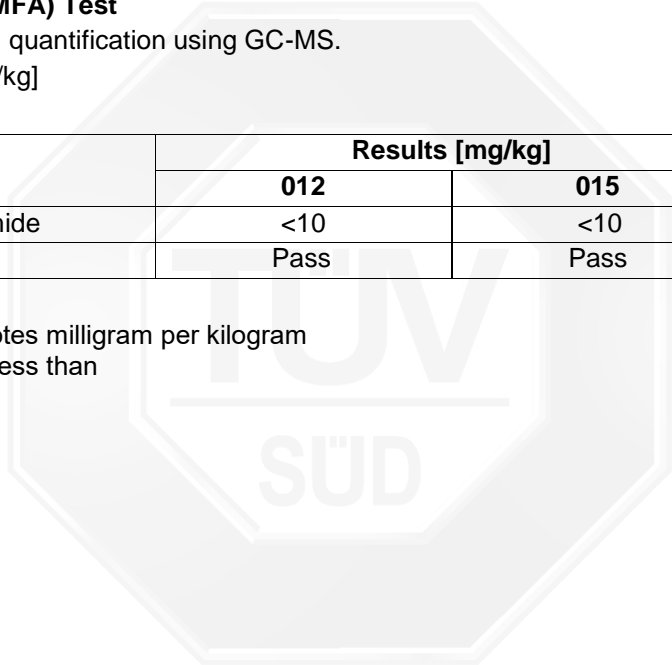
Note: 1. "mg/kg" denotes milligram per kilogram  
 2. "<" denotes less than

**3.15 Dimethylformamide (DMFA) Test**

Extraction with Methanol, quantification using GC-MS.  
 [Reporting Limit = 10 mg/kg]

Items	Results [mg/kg]		Client Limit [mg/kg]
	012	015	
Dimethylformamide	<10	<10	<30
<b>Conclusion</b>	Pass	Pass	-

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



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



3.16 Migration of certain elements

EN 16711-2

Items	Results [mg/kg]				Limit [mg/kg]
	004	005	014	020*	
Antimony (Sb)	1.2	<0.5	<0.5	<0.5	<30.0
Arsenic (As)	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (Cr)	<0.5	<0.5	<0.5	<0.5	<2.0
Cobalt (Co)	<0.5	<0.5	<0.5	<0.5	<1.0
Copper (Cu)	<5.0	<5.0	<5.0	<5.0	<50.0
Lead (Pb)	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium VI (Cr VI)	<0.5	<0.5	<0.5	<0.5	<1.0
Mercury (Hg)	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel (Ni)	<0.5	<0.5	<0.5	<0.5	1.0
<b>Conclusion</b>	Pass	Pass	Pass	Pass	-

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



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.17 Flame Retardants Test**

**3.17.1 ISO 17881**

[Reporting Limit = 5 mg/kg]

Items	Results [mg/kg]				Client Limit [mg/kg]
	001	002	004	005	
Bromobiphenyl (MonoBB)	<5	<5	<5	<5	-
Dibromobiphenyl (DiBB)	<5	<5	<5	<5	-
Tribromobiphenyl (TriBB)	<5	<5	<5	<5	-
Tetrabromobiphenyl (TetraBB)	<5	<5	<5	<5	-
Pentabromobiphenyl (PentaBB)	<5	<5	<5	<5	-
Hexabromobiphenyl (HexaBB)	<5	<5	<5	<5	-
Heptabromobiphenyl (HeptaBB)	<5	<5	<5	<5	-
Octabromobiphenyl (OctaBB)	<5	<5	<5	<5	-
Nonabromobiphenyl (NonaBB)	<5	<5	<5	<5	-
Decabromobiphenyl (DecaBB)	<5	<5	<5	<5	-
<b>Sum of PBBs</b>	<5	<5	<5	<5	<5
Bromodiphenylether (MonoBDE)	<5	<5	<5	<5	-
Dibromodiphenylether (DiBDE)	<5	<5	<5	<5	-
Tribromodiphenylether (TriBDE)	<5	<5	<5	<5	-
Tetrabromodiphenylether (TetraBDE)	<5	<5	<5	<5	-
Pentabromodiphenylether (PentaBDE)	<5	<5	<5	<5	-
Hexabromodiphenylether (HexaBDE)	<5	<5	<5	<5	-
Heptabromodiphenylether (HeptaBDE)	<5	<5	<5	<5	-
Octabromodiphenylether (OctaBDE)	<5	<5	<5	<5	-
Nonabromodiphenylether (NonaBDE)	<5	<5	<5	<5	-
Decabromodiphenylether (DecaBDE)	<5	<5	<5	<5	-
<b>Sum of PBDEs</b>	<5	<5	<5	<5	<5
Tricresyl phosphate (TCP)	<5	<5	<5	<5	<5
Hexabromocyclododecane (HBCDD)	<5	<5	<5	<5	<5
Trixylyl phosphate (TXP)	<5	<5	<5	<5	<5
Tric(2-chloroethyl) phosphate (TCEP)	<5	<5	<5	<5	<5
Tris(aziridiny)phosphin oxide (TEPA)	<5	<5	<5	<5	<5
Tris (2,3 dibromopropyl) phosphate (Tris)	<5	<5	<5	<5	<5
Tetrabromobisphenol A (TBBPA)	<5	<5	<5	<5	<5
Tris-Chlorpropylphosphate (TCPP)	<5	<5	<5	<5	<5
Tris-dichlorpropylphosphate (TDCP/TDCPP)	<5	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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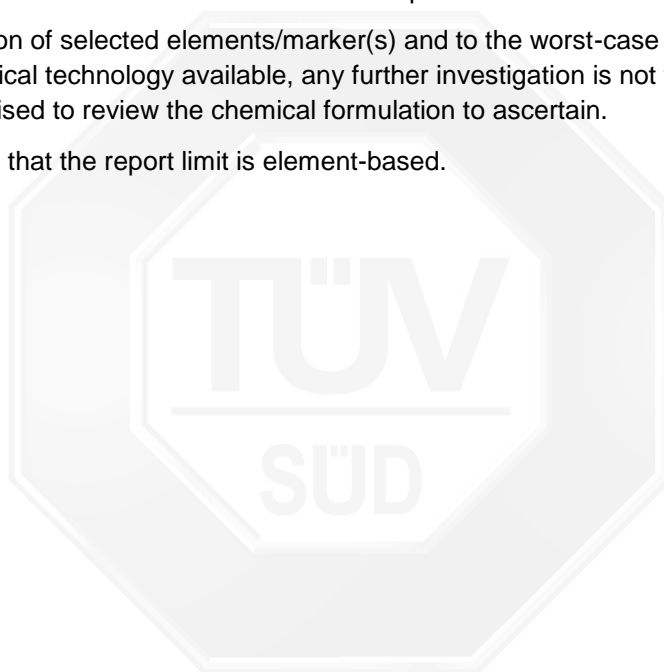


**3.17 Flame Retardants Test**

**3.17.2** In house method, solvent extraction and determination by GC/MS.  
 [Reporting Limit = 5<sup>\$\$</sup> mg/kg]

Items	Results [mg/kg]				Client Limit [mg/kg]
	001	002	004	005	
Boric Acid <sup>\$</sup>	<5	<5	<5	<5	<5
Disodium tetraborate, anhydrous <sup>\$</sup>	<5	<5	<5	<5	<5
Diboron trioxide <sup>\$</sup>	<5	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	Pass	-

- Note:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. "\$" The substances are tested in terms of its respective elements and the test result is based on the calculation of selected elements/marker(s) and to the worst-case scenario. Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.
  4. "\$\$" Indicates that the report limit is element-based.



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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3.17 Flame Retardants Test

3.17.1 ISO 17881

[Reporting Limit = 5 mg/kg]

Items	Results [mg/kg]				Client Limit [mg/kg]
	009	010	012	014	
Bromobiphenyl (MonoBB)	<5	<5	<5	<5	-
Dibromobiphenyl (DiBB)	<5	<5	<5	<5	-
Tribromobiphenyl (TriBB)	<5	<5	<5	<5	-
Tetrabromobiphenyl (TetraBB)	<5	<5	<5	<5	-
Pentabromobiphenyl (PentaBB)	<5	<5	<5	<5	-
Hexabromobiphenyl (HexaBB)	<5	<5	<5	<5	-
Heptabromobiphenyl (HeptaBB)	<5	<5	<5	<5	-
Octabromobiphenyl (OctaBB)	<5	<5	<5	<5	-
Nonabromobiphenyl (NonaBB)	<5	<5	<5	<5	-
Decabromobiphenyl (DecaBB)	<5	<5	<5	<5	-
<b>Sum of PBBs</b>	<5	<5	<5	<5	<5
Bromodiphenylether (MonoBDE)	<5	<5	<5	<5	-
Dibromodiphenylether (DiBDE)	<5	<5	<5	<5	-
Tribromodiphenylether (TriBDE)	<5	<5	<5	<5	-
Tetrabromodiphenylether(TetraBDE)	<5	<5	<5	<5	-
Pentabromodiphenylether (PentaBDE)	<5	<5	<5	<5	-
Hexabromodiphenylether (HexaBDE)	<5	<5	<5	<5	-
Heptabromodiphenylether (HeptaBDE)	<5	<5	<5	<5	-
Octabromodiphenylether (OctaBDE)	<5	<5	<5	<5	-
Nonabromodiphenylether (NonaBDE)	<5	<5	<5	<5	-
Decabromodiphenylether (DecaBDE)	<5	<5	<5	<5	-
<b>Sum of PBDEs</b>	<5	<5	<5	<5	<5
Tricresyl phosphate (TCP)	<5	<5	<5	<5	<5
Hexabromocyclododecane (HBCDD)	<5	<5	<5	<5	<5
Trixylyl phosphate(TXP)	<5	<5	<5	<5	<5
Tric(2-chloroethyl) phosphate (TCEP)	<5	<5	<5	<5	<5
Tris(aziridiny)phosphin oxide (TEPA)	<5	<5	<5	<5	<5
Tris (2,3 dibromopropyl) phosphate (Tris)	<5	<5	<5	<5	<5
Tetrabromobisphenol A(TBBPA)	<5	<5	<5	<5	<5
Tris-Chlorpropylphosphate (TCPP)	<5	<5	<5	<5	<5
Tris-dichlorpropylphosphate (TDCP/TDCPP)	<5	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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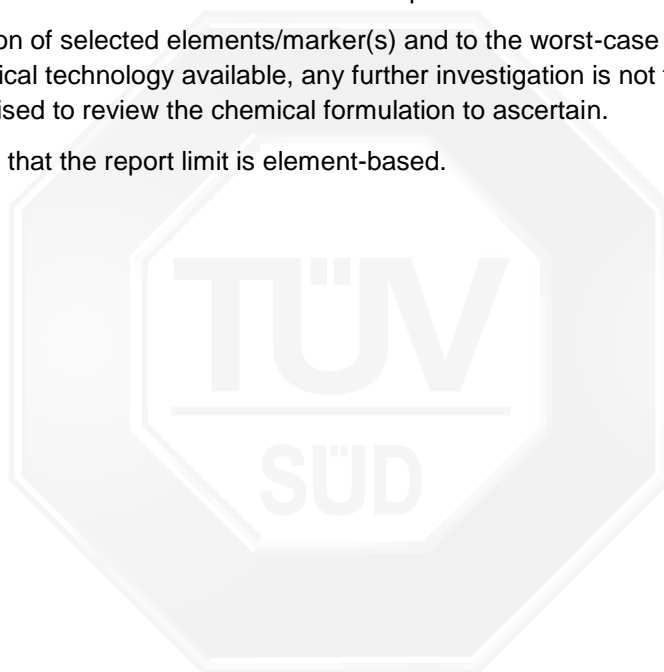


**3.17 Flame Retardants Test**

**3.17.2** In house method, solvent extraction and determination by GC/MS.  
 [Reporting Limit = 5<sup>\$\$</sup> mg/kg]

Items	Results [mg/kg]				Client Limit [mg/kg]
	009	010	012	014	
Boric Acid <sup>\$</sup>	<5	<5	<5	<5	<5
Disodium tetraborate, anhydrous <sup>\$</sup>	<5	<5	<5	<5	<5
Diboron trioxide <sup>\$</sup>	<5	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	Pass	-

- Note:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. "\$" The substances are tested in terms of its respective elements and the test result is based on the calculation of selected elements/marker(s) and to the worst-case scenario. Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.
  4. "\$\$" Indicates that the report limit is element-based.



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant



**3.17 Flame Retardants Test**

**3.17.1 ISO 17881**

[Reporting Limit = 5 mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	018*	019*	020*	
Bromobiphenyl (MonoBB)	<5	<5	<5	-
Dibromobiphenyl (DiBB)	<5	<5	<5	-
Tribromobiphenyl (TriBB)	<5	<5	<5	-
Tetrabromobiphenyl (TetraBB)	<5	<5	<5	-
Pentabromobiphenyl (PentaBB)	<5	<5	<5	-
Hexabromobiphenyl (HexaBB)	<5	<5	<5	-
Heptabromobiphenyl (HeptaBB)	<5	<5	<5	-
Octabromobiphenyl (OctaBB)	<5	<5	<5	-
Nonabromobiphenyl (NonaBB)	<5	<5	<5	-
Decabromobiphenyl (DecaBB)	<5	<5	<5	-
<b>Sum of PBBs</b>	<5	<5	<5	<5
Bromodiphenylether (MonoBDE)	<5	<5	<5	-
Dibromodiphenylether (DiBDE)	<5	<5	<5	-
Tribromodiphenylether (TriBDE)	<5	<5	<5	-
Tetrabromodiphenylether(TetraBDE)	<5	<5	<5	-
Pentabromodiphenylether (PentaBDE)	<5	<5	<5	-
Hexabromodiphenylether (HexaBDE)	<5	<5	<5	-
Heptabromodiphenylether (HeptaBDE)	<5	<5	<5	-
Octabromodiphenylether (OctaBDE)	<5	<5	<5	-
Nonabromodiphenylether (NonaBDE)	<5	<5	<5	-
Decabromodiphenylether (DecaBDE)	<5	<5	<5	-
<b>Sum of PBDEs</b>	<5	<5	<5	<5
Tricresyl phosphate (TCP)	<5	<5	<5	<5
Hexabromocyclododecane (HBCDD)	<5	<5	<5	<5
Trixylyl phosphate(TXP)	<5	<5	<5	<5
Tric(2-chloroethyl) phosphate (TCEP)	<5	<5	<5	<5
Tris(aziridiny)phosphin oxide (TEPA)	<5	<5	<5	<5
Tris (2,3 dibromopropyl) phosphate (Tris)	<5	<5	<5	<5
Tetrabromobisphenol A(TBBPA)	<5	<5	<5	<5
Tris-Chlorpropylphosphate (TCPP)	<5	<5	<5	<5
Tris-dichlorpropylphosphate (TDCP/TDCPP)	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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TÜV SÜD Certification and Testing  
 (China) Co., Ltd  
 Shanghai Branch  
 TÜV SÜD Group  
 No.151 Heng Tong Road  
 Shanghai, 200 070  
 P.R.China



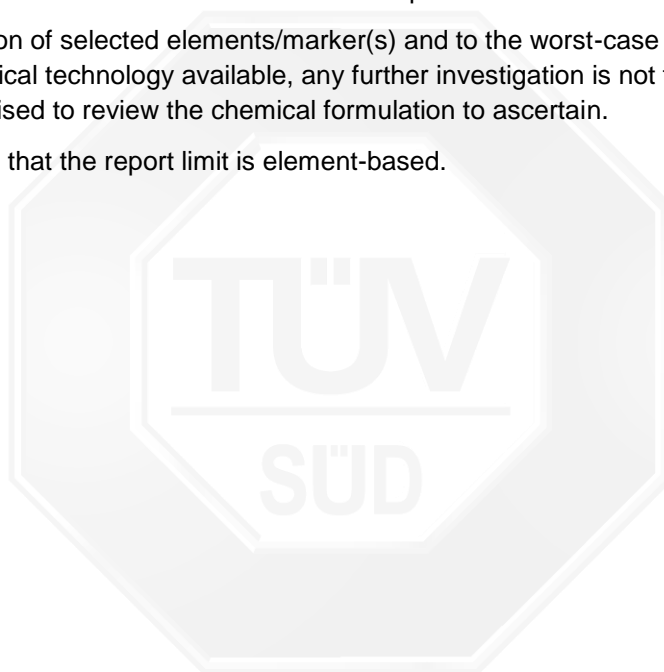
**3.17 Flame Retardants Test**

**3.17.2** In house method, solvent extraction and determination by GC/MS.

[Reporting Limit = 5<sup>\$\$</sup> mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	018*	019*	020*	
Boric Acid <sup>\$</sup>	<5	<5	<5	<5
Disodium tetraborate, anhydrous <sup>\$</sup>	<5	<5	<5	<5
Diboron trioxide <sup>\$</sup>	<5	<5	<5	<5
<b>Conclusion</b>	Pass	Pass	Pass	-

- Note:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. "\$" The substances are tested in terms of its respective elements and the test result is based on the calculation of selected elements/marker(s) and to the worst-case scenario. Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.
  4. "\$\$" Indicates that the report limit is element-based.



Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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**3.18 Carcinogenic and Allergenic Disperse Dye**

With reference to DIN 54231:2005, LCMSMS for analysis.

[Reporting Limit = 15 mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	004	005	009	
C.I. Disperse Blue 1*	<15	<15	<15	<20
C.I. Disperse Blue 3	<15	<15	<15	<20
C.I. Disperse Blue 7	<15	<15	<15	<20
C.I. Disperse Blue 26	<15	<15	<15	<20
C.I. Disperse Blue 35	<15	<15	<15	<20
C.I. Disperse Blue 102	<15	<15	<15	<20
C.I. Disperse Blue 106	<15	<15	<15	<20
C.I. Disperse Blue 124	<15	<15	<15	<20
C.I. Disperse Orange 1	<15	<15	<15	<20
C.I. Disperse Orange 3	<15	<15	<15	<20
C.I. Disperse Orange 37/76**	<15	<15	<15	<20
C.I. Disperse Red 1	<15	<15	<15	<20
C.I. Disperse Red 11	<15	<15	<15	<20
C.I. Disperse Red 17	<15	<15	<15	<20
C.I. Disperse Yellow 1	<15	<15	<15	<20
C.I. Disperse Yellow 3*	<15	<15	<15	<20
C.I. Disperse Yellow 9	<15	<15	<15	<20
C.I. Disperse Yellow 39	<15	<15	<15	<20
C.I. Disperse Yellow 49	<15	<15	<15	<20
C.I. Disperse Brown 1	<15	<15	<15	<20
C.I. Disperse Yellow 23	<15	<15	<15	<20
C.I. Acid Red 26	<15	<15	<15	<20
C.I. Basic Red 9	<15	<15	<15	<20
C.I. Basic Violet 14	<15	<15	<15	<20
C.I. Direct Black 38	<15	<15	<15	<20
C.I. Direct Blue 6	<15	<15	<15	<20
C.I. Direct Red 28	<15	<15	<15	<20
C.I. Disperse Orange 11	<15	<15	<15	<20
C.I. Disperse Orange 149	<15	<15	<15	<20
<b>Conclusion</b>	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

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 TÜV SÜD Group  
 No.151 Heng Tong Road  
 Shanghai, 200 070  
 P.R.China



Tested Dyestuffs :

**Carcinogenic Dyestuffs:**

C.I. Acid Red 26, C.I. Basic Red 9, C.I. Basic Violet 14, C.I. Disperse Blue 1\*, C.I. Disperse Yellow 3\*, C.I. Direct Black 38, C.I. Direct Blue 6, C.I. Direct Red 28, C.I. Disperse Orange 11

**Allergenic Dyestuffs:**

C.I. Disperse Blue 1\*, C.I. Disperse Blue 3, C.I. Disperse Blue 7, C.I. Disperse Blue 26,  
C.I. Disperse Blue 35, C.I. Disperse Blue 102, C.I. Disperse Blue 106, C.I. Disperse Blue 124,  
C.I. Disperse Brown 1,  
C.I. Disperse Orange 1, C.I. Disperse Orange 3, C.I. Disperse Orange 37, C.I. Disperse Orange 76\*\*,  
C.I. Disperse Red 1, C.I. Disperse Red 11, C.I. Disperse Red 17, C.I. Disperse Yellow 1,  
C.I. Disperse Yellow 3\*, C.I. Disperse Yellow 9, C.I. Disperse Yellow 39, C.I. Disperse Yellow 49  
C.I. Disperse Yellow 23, C.I. Disperse Orange 149

\*: Both Allergenic and Carcinogenic; \*\*: equivalent to C.I. Disperse Orange 37



Remarks :  
1. The compositing testing was required by the client  
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P.R.China



**3.18 Carcinogenic and Allergenous Disperse Dye**

With reference to DIN 54231:2005, LCMSMS for analysis.

[Reporting Limit = 15 mg/kg]

Items	Results [mg/kg]			Client Limit [mg/kg]
	010	014	020*	
C.I. Disperse Blue 1*	<15	<15	<15	<20
C.I. Disperse Blue 3	<15	<15	<15	<20
C.I. Disperse Blue 7	<15	<15	<15	<20
C.I. Disperse Blue 26	<15	<15	<15	<20
C.I. Disperse Blue 35	<15	<15	<15	<20
C.I. Disperse Blue 102	<15	<15	<15	<20
C.I. Disperse Blue 106	<15	<15	<15	<20
C.I. Disperse Blue 124	<15	<15	<15	<20
C.I. Disperse Orange 1	<15	<15	<15	<20
C.I. Disperse Orange 3	<15	<15	<15	<20
C.I. Disperse Orange 37/76**	<15	<15	<15	<20
C.I. Disperse Red 1	<15	<15	<15	<20
C.I. Disperse Red 11	<15	<15	<15	<20
C.I. Disperse Red 17	<15	<15	<15	<20
C.I. Disperse Yellow 1	<15	<15	<15	<20
C.I. Disperse Yellow 3*	<15	<15	<15	<20
C.I. Disperse Yellow 9	<15	<15	<15	<20
C.I. Disperse Yellow 39	<15	<15	<15	<20
C.I. Disperse Yellow 49	<15	<15	<15	<20
C.I. Disperse Brown 1	<15	<15	<15	<20
C.I. Disperse Yellow 23	<15	<15	<15	<20
C.I. Acid Red 26	<15	<15	<15	<20
C.I. Basic Red 9	<15	<15	<15	<20
C.I. Basic Violet 14	<15	<15	<15	<20
C.I. Direct Black 38	<15	<15	<15	<20
C.I. Direct Blue 6	<15	<15	<15	<20
C.I. Direct Red 28	<15	<15	<15	<20
C.I. Disperse Orange 11	<15	<15	<15	<20
C.I. Disperse Orange 149	<15	<15	<15	<20
<b>Conclusion</b>	Pass	Pass	Pass	-

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

Remarks : 1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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P.R.China



Tested Dyestuffs :

**Carcinogenic Dyestuffs:**

C.I. Acid Red 26, C.I. Basic Red 9, C.I. Basic Violet 14, C.I. Disperse Blue 1\*, C.I. Disperse Yellow 3\*, C.I. Direct Black 38, C.I. Direct Blue 6, C.I. Direct Red 28, C.I. Disperse Orange 11

**Allergenic Dyestuffs:**

C.I. Disperse Blue 1\*, C.I. Disperse Blue 3, C.I. Disperse Blue 7, C.I. Disperse Blue 26,  
C.I. Disperse Blue 35, C.I. Disperse Blue 102, C.I. Disperse Blue 106, C.I. Disperse Blue 124,  
C.I. Disperse Brown 1,  
C.I. Disperse Orange 1, C.I. Disperse Orange 3, C.I. Disperse Orange 37, C.I. Disperse Orange 76\*\*,  
C.I. Disperse Red 1, C.I. Disperse Red 11, C.I. Disperse Red 17, C.I. Disperse Yellow 1,  
C.I. Disperse Yellow 3\*, C.I. Disperse Yellow 9, C.I. Disperse Yellow 39, C.I. Disperse Yellow 49  
C.I. Disperse Yellow 23, C.I. Disperse Orange 149

\*: Both Allergenic and Carcinogenic; \*\*: equivalent to C.I. Disperse Orange 37



Remarks :  
1. The compositing testing was required by the client  
2. The test items were specified by the applicant

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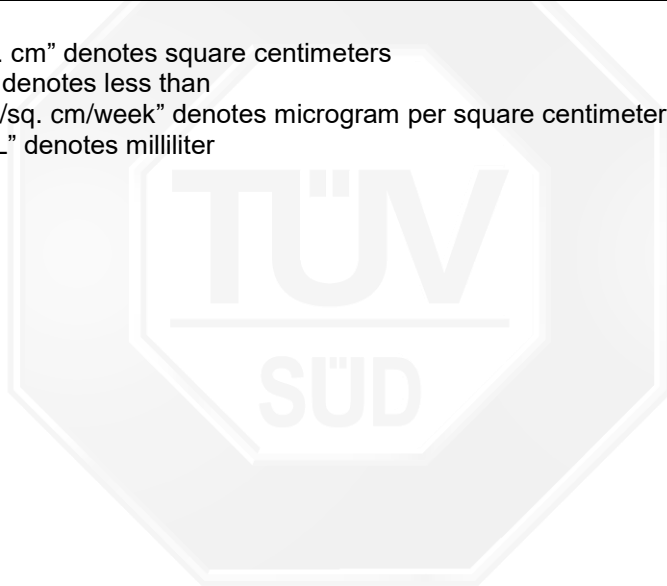
**3.19 Nickel Release Test**

European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Annex XVII, Entry 27 with Amendment up to (EC)No. 552/2009  
 Test according to EN1811:2011+A1:2015

<b>Maximum Allowable Limit:</b>	<b>0.50 ug/sq. cm/week</b>
---------------------------------	----------------------------

Test Item	Result		
	007		
Parameter	Surface Area	Volume of Test Solution	Nickel (Ni) Release
Unit	sq. cm	mL	ug/sq. cm/week
Trial 1 - Measurement 1	96.40	96.40	<0.05
Trial 1 - Measurement 2	96.40	96.40	<0.05
Trial 1 - Measurement 3	96.40	96.40	<0.05
<b>Conclusion</b>	Pass		

- Note:
1. "sq. cm" denotes square centimeters
  2. "<" denotes less than
  3. "ug/sq. cm/week" denotes microgram per square centimeters per week
  4. "mL" denotes milliliter



Remarks :  
 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant





**3.16 Colour Fastness to Saliva & Sweat**

DIN 53160-1:2010 & DIN 53160-2:2010

	018*	020*	Client Limit
Saliva			
Staining on filter paper	5	5	4-5
Sweat			
Staining on filter paper	5	5	4-5
<b>Conclusion</b>	Pass	Pass	-

Remark: **COLOURFASTNESS RATING**  
 Grade 5 negligible or no change or staining  
 Grade 4 slightly changed or stained  
 Grade 3 noticeably changed or stained  
 Grade 2 considerably changed or stained  
 Grade 1 much changed or stained



Remarks : 1. The compositing testing was required by the client  
 2. The test items were specified by the applicant

4. Remark

Only the results marked with “\*” were quoted from the test report no.: 70.300.20.20858.01-00 dated on 2020-11-03, all the other results were conducted in this report.

5. Documentation

Product Photo



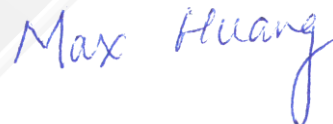
Hardlines-MES  
TÜV SÜD Certification and Testing (China) Co., Ltd.  
Shanghai Branch

Prepared by:



Rongrong Song  
Project Engineer  
SHMES

Reviewed by:



Jiyu Huang  
Technical Manager  
SHMES



~ End Of Report ~

Remarks : 1. The compositing testing was required by the client  
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P.R.China



## 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:
- (a) The terms of any standard specification sheet or standard order form provided by the Company; and/or
- (b) Any relevant usage, practice or trade custom; and/or
- (c) 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:

- (3.1) 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 manner not later than 2 working days from the date of which the services are requested by the Client
- (3.2) 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;
- (3.3) make available any special equipment and personnel necessary for the performance of the services, if required;
- (3.4) 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;
- (3.5) 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;
- (3.6) 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

- (4.1) 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.
- (4.2) 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").
- (4.3) 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.

- (4.4) 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.
- (4.5) 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.
- (4.6) 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:
- (1) The amount of all non-refundable expenses incurred by the Company; and
- (2) 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:

- (5.1) 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
- (5.2) 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:

- (1) 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.
- (2) 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.
- (3) 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.
- (4) 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 CNY.
- (5) For any indirect or consequential loss (including loss of profits), the Company shall not have any liabilities.
- (6) 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:
- (i) the performance date of the Company for its services which refers to the claim; or
- (ii) 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

- (7.1) 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.
- (7.2) 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.
- (7.3) 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

- (8.1) 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.
- (8.2) 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.
- (8.3) 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

- (9.1) 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 People's Republic of China.
- (9.2) Place of performance for any obligation arising out of this contract shall be Shanghai, the Place of the TÜV SÜD Certification and Testing (China) Co., Ltd., Shanghai branch, 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.