

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: Same as above

Test subject: Product: Orange PVC

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.

For full version, please visit: http://www.tuv-sud.cn/zh-cn/terms-and-conditions

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

 $2. \ \mbox{The test items}$  were specified by the applicant

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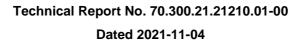
(China) Co., Ltd Shanghai Branch TÜV SÜD Group

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### **EXECUTIVE SUMMARY:**

	TEST REQUESTED	CONCLUSION	Remark
1.	Polycyclic Aromatic Hydrocarbons(PAH)content Test	Pass	-
2.	Phthalates Test	Pass	-
3.	Azo Dyes Content	Pass	-
4.	Organotin Compounds Content Test	Pass	-
5.	Total Cadmium Content Test	Pass	-
6.	Total Lead Content Test	Pass	-
7.	Short-Chain Chlorinated Paraffins (SCCP) Test	Pass	-
8.	Nonylphenol (NP)/ Octylphenol (OP) Content Test	Pass	-
9.	Nonylphenol Ethoxylates (NPEO) and Octylphenol Ethoxylates (OPEO) Content Test	Pass	-
10.	Sensory verification of odor	Pass	-
11.	Formamide Test	Pass	-
12.	Flame Retardants Test	Pass	-
13.	Carcinogenic and Allergenous Disperse Dye	Pass	-
14.	Migration of certain elements	Pass	-
15.	Perfluoroctane Acid (PFOA) Content Test	Pass	-
16.	Perfluoroctane Sulfonates (PFOS) Content	Pass	-
17.	Fabric Test	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	Orange soft plastic with backing fabric	78970123456789801234567899012345678910012345678911012345	-



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#### 2. Order

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

2021-10-29

### 2.2 Receipt of Test Sample, Location

2021-10-29

No. 1999 Duhui Road, Shanghai, P.R.China TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

#### 2.3 Date of Testing

2021-10-29 to 2021-11-03

#### 2.4 Location of Testing

No. 1999 Duhui Road, Shanghai, P.R.China TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

### 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 = 0.1mg/kg]

	Result [mg	/kg]
Compounds	001	
Naphthalene	<0.1	
Phenanthrene	<0.1	
Anthracene	<0.1	
Fluoranthene	<0.1	
Pyrene	<0.1	
Sum of detected 4 PAHs	<0.1	
Benzo[a]anthracene^	<0.1	
Chrysene <sup>^</sup>	<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	
Sum of detected 15 PAHs	<0.1	
Category as AfPS GS Specification – Non Children Articles	Cat. 2	Cat. 3
Conclusion <sup>4</sup> (AfPS GS Specification)	Pass	Pass

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Note: 1. "<" denotes less than

- 2. "mg/kg" denotes milligram per kilogram
- 3. "^" 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 and the control of t	Materials not category 1, conterm contact short-term rep skin during the foreseeable u	oming into long- (more than 30s) or petitive contact <sup>c</sup> with e intended or se <sup>d</sup>	Materials co category 1 r short-term s 30s) with sk intended or	ategory 3 overed neither by nor 2, coming into skin contact (up to in during the foreseeable use
-		a. Used by	b. Other consumer	a. Used by	b. Other consumer
		children	products	children	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. A "child" is legally defined as a person before reaching the age of 14 years.
- b. Use by children includes both active and passive direct contact by children.
- Definition "short-term repetitive contact" taken form REACH Annex XVII entry 50 amendment (Regulation (EC) No.1272/2013).
- d. 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.
- 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[ilfluoranthene	Each < 0.5	Each < 1.0

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#### 3.2 Phthalates Test

CPSC-CH-C1001-09.4 [Reporting Limit = 0.005 %]

Dorometer	CACNO	Results [%]	Client
Parameter	CAS No.	001	Limit [%]
Di increased whith plate (DINID)	28553-12-0 ,	.0.005	
Di-isononyl phthalate, (DINP)	68515-48-0	<0.005	-
Di-isodecyl phthalate, (DIDP)	26761-40-0 ,	<0.005	
Di-isodecyi phihalale, (DIDP)	68515-49-1	<0.005	-
Di-n-octyl phthalate, (DNOP)	117-84-0	<0.005	-
Sun DINP, DIDP, DNOP	-	< 0.005	<0.1
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
Diisobutylphthalate, (DIBP)	84-69-5	<0.005	<0.1
Dipentyl phthalate (DPP)	131-18-0	<0.005	<0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	<0.005	<0.1
1,2-Benzenedicarboxylicacid, di-C6-8-	71000 00 6	40 00E	-0.1
branched alkyl esters,C7-rich (DIHP)	71888-89-6	<0.005	<0.1
1,2-Benzenedicarboxylicacid, di-C7-11-			
branched and linearalkyl esters	68515-42-4	<0.005	<0.1
(DHNUP)			
Dicyclohexyl phthalate (DCHP)	84-61-7	< 0.005	<0.1
Diisopentyl phthalate (DiPP)	605-50-5	< 0.005	<0.1
n-Pentyl-isopentylphthalate (nPiPP)	776297-69-9	<0.005	<0.1
Diisooctyl phthalate (DIOP)	27554-26-3	< 0.005	<0.1
1,2-Benzenedicarboxylic			
acid,dipentylester branched and linear	84777-06-0	< 0.005	<0.1
(DPP)			
Di-n-hexyl phthalate (DHP)	84-75-3	<0.005	<0.1
1,2-Benzenedicarboxylic acid, dihexyl	68515-50-4	<0.005	<0.1
ester, branched and linear	00010-00-4	<0.005	<0.1
1,2-benzenedicarboxylic acid,di-C6-10-			
alkyl esters;1,2-benzenedicarboxylic	68515-51-5, 68648-93-1 <0.005		<0.1
acid,mixed decyl and hexyl and octyl			<0.1
diesters with≥0.3%of dihexyl phthalate			
Dipropylheptyl phthalate(DPHP)	53306-54-0	<0.005	<0.1
Di-iso-hexyl phthalate,DiHxP	71850-09-4	<0.005	<0.1
Conclusion		Pass	-

Note: 1. "%" denotes percentage by weight

2. "<" denotes less than

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#### 3.3 **Azo Dyes Content**

Test with reference to EN ISO 14362-1:2017 [Reporting Limit = 5.0 mg/kg].

Davameter	CAS-No	Result [mg/kg]	Client
Parameter	CAS-NO	001	Limit [mg/kg]
4-aminobiphenyl	92-67-1	<5.0	<20
Benzidine	92-87-5	<5.0	<20
4-chloro-o-toluidine	95-69-2	<5.0	<20
2-naphthylamine	91-59-8	<5.0	<20
o-aminoazotoluene	97-56-3	<5.0	<20
5-nitro-o-toluidine	99-55-8	<5.0	<20
4-chloroaniline	106-47-8	<5.0	<20
2,4-diaminoanisole	615-05-4	<5.0	<20
4,4'-diaminodiphenylmethane	101-77-9	<5.0	<20
3,3'-dichlorobenzidine	91-94-1	<5.0	<20
3,3'-dimethoxybenzidine	119-90-4	<5.0	<20
3,3'-dimethylbenzidine	119-93-7	<5.0	<20
4,4'-methylenedi-o-toluidine	838-88-0	<5.0	<20
p-cresidine	120-71-8	<5.0	<20
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	<5.0	<20
4,4'-oxydianiline	101-80-4	<5.0	<20
4,4'-thiodianiline	139-65-1	<5.0	<20
o-toluidine	95-53-4	<5.0	<20
2,4-toluenediamine	95-80-7	<5.0	<20
2,4,5-trimethylaniline	137-17-7	<5.0	<20
2-methoxyaniline	90-04-0	<5.0	<20
2,4-xylidine	95-68-1	<5.0	<20
2,6-xylidine	87-62-7	<5.0	<20
4-aminoazobenzene	60-09-3	<5.0	<20
Aniline	62-53-3	<5.0	<100
Test Method		EN ISO 14362-1:2017	-
Conclusion		Pass	-

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

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#### **Organotin Compounds Content Test** 3.4

Test with reference to ISO/TS 16179:2012, determination by GC-MS. [Reporting Limit = 0.025 mg/kg]

Organotin	Tested item [mg/kg]	Client
Organotin	001	Limit [mg/kg]
MMT	<0.025	≤1.0
DMT	<0.025	≤1.0
MBT	<0.025	≤1.0
DBT	<0.025	≤1.0
TeBT(TTBT)	<0.025	≤1.0
DprT	<0.025	≤1.0
MOT	<0.025	≤1.0
DOT	<0.025	≤1.0
ТсуТ	<0.025	≤1.0
DPhT	<0.025	≤1.0
TPhT.	<0.025	≤1.0
TBT	<0.025	≤1.0
Tripropyltin(TPrT)	<0.025	≤1.0
Conclusion	Pass	-

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

2. "<" denotes less than, "≤" denotes not more than

#### 3.5 **Total Cadmium Content Test**

EN 16711-1

[Reporting Limit: 10.0 mg/kg]

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

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

2. "<" denotes less than

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Remarks:

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### 3.6 Total Lead Content Test

EN 16711-1

[Reporting Limit: 10.0 mg/kg]

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

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

2. "<" denotes less than

### 3.7 Short-Chain Chlorinated Paraffins (SCCP) Test

Test with reference to ISO18219:2015, determination by GC-MS-NCI. [Reporting Limit = 100 mg/kg]

Test Item(s)	Result [mg/kg]	Client Limit [mg/kg]	Conclusion
001	<100	<1000	Pass

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

2. "<" denotes less than

### 3.8 Nonylphenol (NP)/ Octylphenol (OP) Content Test

ISO 21084:2019

[Reporting Limit = 10.0 mg/kg]

Items	Results [mg/kg] 001	Client Limit [mg/kg]
Nonyl phenol (NP)	<10.0	<100
Octyl phenol (OP)	<10.0	<100
Conclusion	Pass	-

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

2. "<" denotes less than

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Remarks:



### 3.9 Nonylphenol Ethoxylates (NPEO) and Octylphenol Ethoxylates (OPEO) Content Test

Test with reference to ISO18254-1:2016, determination by LC-MS. [Reporting Limit = 10.0 mg/kg]

Items	Results [mg/kg] 001	Client Limit [mg/kg]
Nonylphenolethoxylates (NPEO)	<10.0	<100
Octylphenolethoxylates (OPEO)	<10.0	<100
Conclusion	Pass	-

Note:

1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

### 3.10 Sensory verification of odor

Client's specification with reference to SNV 195651

Items	Results [Score]	Client Limit
items	001	[Score]
Average Value	1.0	<3
Conclusion	Pass	-

Note: S

Scoring

1 = Odourless 2 = Week odour 3 = Tolerable odour

4 = Annoying odour

5 = Intolerable odour

### 3.11 Formamide Test

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

Items	Results [mg/kg]	Client Limit
items	001	[mg/kg]
Formamide	<10	<30
Conclusion	Pass	-

Note:

1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

1. The compositing testing was required by the client

2. The test items were specified by the applicant  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

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#### 3.12 Flame Retardants Test

### **3.12.1** ISO 17881

[Reporting Limit = 5 mg/kg]

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

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

1. The compositing testing was required by the client

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#### 3.12 Flame Retardants Test

**3.12.2** In house method, solvent extraction and determination by GC/MS. [Reporting Limit =  $5^{$$}$  mg/kg]

Items	Results [mg/kg] 001	Client Limit [mg/kg]
Boric Acid <sup>\$</sup>	<5	<5
Disodium tetraborate, anhydrous <sup>\$</sup>	<5	<5
Diboron trioxide <sup>\$</sup>	<5	<5
Antimony trioxide <sup>\$</sup>	<5	<5
Conclusion	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.

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1. The compositing testing was required by the client

2. The test items were specified by the applicant

Remarks:

Project No.:

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### 3.13 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
items	001	[mg/kg]
C.I. Disperse Blue 1	<15	<20
C.I. Disperse Blue 3	<15	<20
C.I. Dipserse Blue 7	<15	<20
C.I. Disperse Blue 26	<15	<20
C.I. Disperse Blue 35	<15	<20
C.I. Disperse Blue 102	<15	<20
C.I. Disperse Blue 106	<15	<20
C.I. Disperse Blue 124	<15	<20
C.I. Disperse Orange 1	<15	<20
C.I. Disperse Orange 3	<15	<20
C.I. Disperse Orange 37/76**	<15	<20
C.I. Disperse Red 1	<15	<20
C.I. Disperse Red 11	<15	<20
C.I. Dipserse Red 17	<15	<20
C.I. Disperse Yellow 1	<15	<20
C.I. Disperse Yellow 3	<15	<20
C.I. Disperse Yellow 9	<15	<20
C.I. Disperse Yellow 39	<15	<20
C.I. Disperse Yellow 49	<15	<20
C.I. Disperse Brown 1	<15	<20
C.I. Acid Red 26	<15	<20
C.I. Basic Red 9	<15	<20
C.I. Basic Violet 14	<15	<20
C.I. Direct Black 38	<15	<20
C.I. Direct Blue 6	<15	<20
C.I. Direct Red 28	<15	<20
C.I, Disperse Orange 11	<15	<20
Solvent Yellow 2	<15	<20
Basic Violet 3	<15	<20
Solvent Yellow 1	<15	<20
C.I. Basic Blue 26	<15	<20
C.I. Solvent Blue 4	<15	<20
Michler's base	<15	<20
Acid red 114	<15	<20
Conclusion	Pass	-

Note: 1. "<" denotes less than

2. "mg/kg" denotes milligram per kilogram

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Remarks:

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#### 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

### **Allergenous 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 Allergenous and Carcinogenic; \*\*: equivalent to C.I. Disperse Orange 37



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#### 3.14 Migration of certain elements

EN 16711-2

Items	Results [mg/kg]	Limit
items	001	[mg/kg]
Antimony (Sb)	<0.5	<30.0
Arsenic (As)	<0.2	<0.2
Cadmium (Cd)	<0.1	<0.1
Chromium (Cr)	<0.5	<2.0
Cobalt (Co)	<0.5	<1.0
Copper (Cu)	<5	<50.0
Lead (Pb)	<0.2	<0.2
Chromium VI (Cr VI)	<0.5	<1.0
Mercury (Hg)	<0.02	<0.02
Nickel (Ni)	<0.5	<1.0
Conclusion	Pass	-

Note:

1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

### 3.15 Perfluoroctane Acid (PFOA) Content Test

**CEN/TS 15968** 

[Reporting Limit =  $1.0 \mu g/m^2$ ]

Test Item(s)	Result [µg/m²]	Client Limit [µg/m²]	Conclusion
001	<1.0	<1.0	Pass

Note:

1. "<" denotes less than

2. "µg/m2" denotes microgram per square meter

### 3.16 Perfluoroctane Sulfonates (PFOS) Content

European Parliament and Council Regulation (EC) No. 2019/1021 on Persistent Organic Pollutants (POPs) CEN/TS 15968

[Reporting Limit =  $1.0 \mu g/m^2$ ]

Test Item(s)	Result [µg/m²]	Limit [µg/m²]	Conclusion
001	<1.0	< 1.0	Pass

Note:

1. "<" denotes less than

1. The compositing testing was required by the client

2. The test items were specified by the applicant

2. "µg/m2" denotes microgram per square meter

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#### 3.17 Fabric Test

### I. Colour Fastness to Sweat DIN 53160-2:2010

Sweat
Staining on filter paper

5

Client's Requirement

4-5

**Pass** 

### II. Colour Fastness to Perspiration

DIN EN ISO 105 E04:2013

Conclusion

	001		Client's Requirement
	Acidic	Alkaline	1
Colour change -Change in shade Colour staining	4-5	4-5	4
-Acetate	4-5	4-5	3-4
-Cotton	4-5	4-5	3-4
-Nylon	4-5	4-5	3-4
-Polyester	4-5	4-5	3-4
-Acrylic	4-5	4-5	3-4
-Wool	4-5	4-5	3-4
Conclusion		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

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4. Remark

None

5. Documentation

None

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

Prepared by:

Reviewed by:

Rongrong Song Project Engineer

**SHMES** 

TÜV SÜD

> Jiyu Huang Technical Manager SHMES

~ End Of Report ~

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1. The compositing testing was required by the client

2. The test items were specified by the applicant  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

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