

## TEST REPORT

Test Report # 20W-002992 Date of Report Issue: April 14, 2020  
Date of Sample Received: March 30, 2020 Pages: Page 1 of 14

### CLIENT INFORMATION:

Company: Stefan Helmert  
Address: stefan@entroserv.de

### SAMPLE INFORMATION:

Product Name: comfort airbed tpu  
Product Reference No.: SH2019080802  
Style No.: - Labeled Age Grade: -  
Order No. (PO No.): SH2019080802init250 Client Request Age Grade: 7 years+  
Country of Origin: China Recommended Age Grade: -  
Country of Distribution: Europe Tested Age Grade: 7 years+  
Testing Period: 03/31/2020-04/14/2020



### OVERALL RESULT:

 **PASS**

Please refer to the following pages for test result summary and appropriate notes.

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*Kevin Lee*

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Technical Manager



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Test(s) marked with 'φ' was subcontracted to external laboratory.

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and method /regulation section(s) tested as described herein.  
If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA decision rule.

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## TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	EN 71-3: 2019 Safety of Toys, Migration of Certain Elements
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 20 Organostannic Compounds
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 Phthalates – Non-Mouthable (DBP, BBP, DEHP, DIBP)
PASS	EC Directive 94/62/EC and its amendments, Heavy Metals in Packaging
PASS	EN71-1:2014+A1:2018 Safety of toys - Part 1: Mechanical and physical properties (Excepted labeling and section 6 check as per client's request)
PASS	EN71-2:2011+A1:2014 Safety of toys - Part 2: Flammability



**DETAILED RESULTS:**

**EN 71-3: 2019 Safety of Toys, Migration of Certain Elements**

Test Method: EN 71-3:2019

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Category III: Scraped-off materials

Specimen No.	1	2	3	4	RL (mg/kg)	Soluble Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)		
Aluminum (Al)	ND	ND	ND	ND	50	70 000
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	50	18 750
Boron (B)	ND	ND	ND	ND	50	15 000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium III (Cr III)^	ND	ND	ND	ND	0.02	460
Chromium VI (Cr VI)^	ND	ND	ND	ND	0.02	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	50	7 700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	50	15 000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	50	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	50	56 000
Tin (Sn)	ND	ND	ND	ND	1	180 000
Organic Tin^^	ND	ND	ND	ND	1	12
Zinc (Zn)	ND	ND	ND	ND	50	46 000
<b>Conclusion</b>	PASS	PASS	PASS	PASS		

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

^Soluble Chromium is reported when the soluble chromium result below the chromium VI limit.

^^ Soluble Tin is reported when the result is below the adjusted soluble organic tin limit 1 mg/kg.



**DETAILED RESULTS:**

**EN 71-3: 2019 Safety of Toys, Migration of Certain Elements**

Test Method: EN 71-3:2019

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Category III: Scraped-off materials

Specimen No.	5	---	---	---	RL (mg/kg)	Soluble Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)		
Aluminum (Al)	ND	---	---	---	50	70 000
Antimony (Sb)	ND	---	---	---	10	560
Arsenic (As)	ND	---	---	---	10	47
Barium (Ba)	ND	---	---	---	50	18 750
Boron (B)	ND	---	---	---	50	15 000
Cadmium (Cd)	ND	---	---	---	5	17
Chromium III (Cr III)^	ND	---	---	---	0.02	460
Chromium VI (Cr VI)^	ND	---	---	---	0.02	0.053
Cobalt (Co)	ND	---	---	---	10	130
Copper (Cu)	ND	---	---	---	50	7 700
Lead (Pb)	ND	---	---	---	10	23
Manganese (Mn)	ND	---	---	---	50	15 000
Mercury (Hg)	ND	---	---	---	10	94
Nickel (Ni)	ND	---	---	---	50	930
Selenium (Se)	ND	---	---	---	10	460
Strontium (Sr)	ND	---	---	---	50	56 000
Tin (Sn)	ND	---	---	---	1	180 000
Organic Tin^^	ND	---	---	---	1	12
Zinc (Zn)	ND	---	---	---	50	46 000
<b>Conclusion</b>	PASS	---	---	---		

**Note:**

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

^Soluble Chromium is reported when the soluble chromium result below the chromium VI limit.

^^ Soluble Tin is reported when the result is below the adjusted soluble organic tin limit 1 mg/kg.



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials**

Test Method: CPSC-CH-E1001-08.3 (Metal) and/or CPSC-CH-E1002-08.3 (Non-Metal)  
Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2+5	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	---	---	---	---	500
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials**

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2+5	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	---	---	---	---	<b>100</b>
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 20 Organostannic Compounds**

Test Method: ISO/TS 16179:2012

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.	2+5	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Tributyltin (TBT)	ND	---	---	---	---	<b>1000</b>
Triphenyltin (TPT)	ND	---	---	---	---	<b>1000</b>
Dibutyltin (DBT)	ND	---	---	---	---	<b>1000</b>
Diocetyltn (DOT)	ND	---	---	---	---	<b>1000</b>
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit =10mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)**

Test Method: AfPS GS 2019:01

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.	2+5	---	---	---	Limit (mg/kg)	
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Benzo [a] pyrene (BaP)	50-32-8	ND	---	---	---	<b>1</b>
Benzo [e] pyrene (BeP)	192-97-2	ND	---	---	---	<b>1</b>
Benzo [a] anthracene (BaA)	56-55-3	ND	---	---	---	<b>1</b>
Chrysene (CHR)	218-01-9	ND	---	---	---	<b>1</b>
Benzo [b] fluroanthene (BbFA)	205-99-2	ND	---	---	---	<b>1</b>
Benzo [j] fluroanthene (BjFA)	205-82-3	ND	---	---	---	<b>1</b>
Benzo [k] fluroanthene (BkFA)	207-08-9	ND	---	---	---	<b>1</b>
Dibenzo [a,h] anthracene (DBAhA)	53-70-3	ND	---	---	---	<b>1</b>
<b>Conclusion</b>		PASS	---	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 0.2 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.





**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 Phthalates – Non-Mouthable (DBP, BBP, DEHP, DIBP)**

Test Method: CPSC-CH-C1001-09.4  
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		2+5	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	---	---	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	---	---	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	---	---	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	---	---	1000
Sum of DBP, BBP, DEHP, DIBP		ND	---	---	1000
<b>Conclusion</b>		PASS	---	---	

*Note:*  
 mg/kg (Milligrams per kilogram) = ppm (Parts per million) = 0.0001 % m/m (Percent by mass)  
 LT = Less than  
 ND = Not detected (Reporting Limit = 150 mg/kg)  
 Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:**

**EC Directive 94/62/EC and its amendments, Heavy Metals in Packaging**

Test Method: US EPA 3052:1996 & US EPA 6010D:2014  
 US EPA 3060A:1996 & US EPA 7196A: 1992  
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry,  
 Ultraviolet-Visible Spectrophotometry

Specimen No.	6	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Cadmium (Cd)	ND	---	---	---	---	
Chromium (VI) [Cr (VI)]	ND	---	---	---	---	
Lead (Pb)	ND	---	---	---	---	
Mercury (Hg)	ND	---	---	---	---	
Sum	ND	---	---	---	---	<b>100</b>
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*  
 mg/kg = Milligrams per kilogram  
 LT = Less than  
 ND = Not detected (Reporting Limit = 15 mg/kg)  
 Total Chromium is reported for Chromium (VI) unless specified.



**DETAILED RESULTS:**

**EN 71-1:2014+A1:2018 Safety of toys - Part 1: Mechanical and physical properties**

Clause	Test	Conclusion
4.1	Material cleanliness	PASS
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
4.15	Toys intended to bear the mass of a child	PASS
6	Packaging	NC
7	Warnings, markings and instructions for use	NC

NC=Not Conducted

Remark: The toy labeling requirement was not conducted on this non-toy item.

**EN71-2:2011+A1:2014 Safety of toys - Part 2: Flammability**

Test	Observation	Conclusion
4.1 General	No visual signs of Cellulose Nitrate.	PASS



**SPECIMEN DESCRIPTION:**

Specimen No.	Specimen Description	Location
1	Grey soft plastic	Sealing gasket
2	Grey soft plastic	Sealing ring of hole
3	Grey plastic	Lid
4	Grey plastic	Joint of lid
5	Translucent soft plastic	Main body
6	Black printed transparent plastic	Packaging bag



**SAMPLE PHOTO:**



**SAMPLE PHOTO:**



-End Report-

