TEST REPORT

APPLICANT : PT. INOCYCLE TECHNOLOGY GROUP TBK.
JL. SOLO-PURWODADI KM 7.2 SELOREJO
RT 02 RW 09 WONOREJO GONDANGREJO
KARANGANYAR

ATTN: ULUL AZMI / DEVI SETYANINGTYAS

DATE : NOVEMBER 15, 2019

SAMPLE DESCRIPTION:

SUBMITTED SAMPLE SAID TO BE:

SAMPLE DESCRIPTION	: POLYESTER STAPPLE FIBER
COLORS	: WHITE
TESTING STAGE	: PRODUCTION SAMPLE
REASON FOR REVISION	: CHANGE APPLICANT NAME FROM PT. HILON FELT TO PT. INOCYCLE TECHNOLOGY GROUP TBK. AS PER CLIENT REQUEST

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TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGES.

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CONCLUSION:

TESTED SAMPLE	STANDARD	RESULT
SUBMITTED SAMPLE	IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON TOTAL LEAD CONTENT	PASS
	IKEA SPECIFICATION IOS-MAT-0054 VERSION NO. AA-92520-11 ON TOTAL LEAD CONTENT IN CHILDREN'S PRODUCTS	PASS
	IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON TOTAL CADMIUM CONTENT	PASS
	IKEA'S SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON HEXAVALENT CHROMIUM (CR(VI))	PASS
	IKEA SPECIFICATION IOS-MAT-0054 VERSION NO. AA-92520-11 FOR MIGRATION OF CERTAIN ELEMENTS	PASS
	IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON EXTRACTABLE HEAVY METALS	PASS
	IKEA'S SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON ORGANOTIN CONTENT	PASS

PT. Intertek Utama Services Citrabuana Indoloka Building
Jl. Cikini IV No.2, Gondangdia
Jakarta 10330, Indonesia

Telp. (62-21) 391 8584 (Hunting), 391 8574 (Direct), Fax. (62-21) 391 8345
Hardline Laboratory:
Jakarta (62-21) 391 6611, Semarang (62-24) 762 7107 / 762 7325
Email : hlcoordinator.indonesia@intertek.com **Website:** www.intertek.com

IKEA SPECIFICATION IOS-MAT-0054 VERSION NO. AA-92520-11 ON ORGANOTIN CONTENT	PASS
IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON FLAME RETARDANT CONTENT	SEE DETAILS ENCLOSED
IKEA SPECIFICATION IOS-MAT-0054 VERSION NO. AA-92520-11 ON FLAME RETARDANT CONTENT	SEE DETAILS ENCLOSED
IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON ALKYLPHENOLETHOXYLATES (APEO), ALKYLPHENOLS (AP) AND ALKYLPHENOL PHOSPHITES CONTENT	PASS
IKEA SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON MIGRATION OF BISPHENOL A, BISPHENOL S AND BISPHENOLF	PASS
IKEA'S SPECIFICATION IOS-MAT-0010 VERSION NO. AA-10911-14 ON FORMALDEHYDE CONTENT	PASS
IKEA'S SPECIFICATION IOS-MAT-0054 VERSION NO. AA-92520-11 ON FORMALDEHYDE CONTENT	PASS

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PREPARED AND CHECKED BY:
FOR INTERTEK INDONESIA

TAUFIQ URAKHMAN
HARDLINE LAB MANAGER

PT. Intertek Utama Services Citrabuana Indoloka Building
Jl. Cikini IV No.2, Gondangdia
Jakarta 10330, Indonesia

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TESTS CONDUCTED:

1 Total Lead (Pb) Content:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, Acid Digestion Method Was Used And The Total Lead Content Was Determined By Inductively Coupled Argon Plasma Spectrophotometry.

Tested Component	Result in mg/kg	Limit in mg/kg
(1)	<10	90

Remark: mg/kg = milligram per kilogram

2 Total Lead (Pb) Content In Children's Products:

As Per IKEA Specification IOS-MAT-0054 Version No. AA-92520-11, Analysed By Inductively Coupled Argon Plasma Spectrometry.

Test Method : CPSC-CH-E1002-08.3 For Non-Metal Material

Tested Component	Result in mg/kg	Limit in mg/kg
(1)	<10	40

Remark: mg/kg = milligram per kilogram

3 Total Cadmium (Cd) Content:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, Acid Digestion Method Was Used And The Total Cadmium Content Was Determined By Inductively Coupled Argon Plasma Spectrophotometry.

Tested Component	Result in mg/kg	Limit in mg/kg
(1)	<5	40

Remark: mg/kg = milligram per kilogram

4 Hexavalent Chromium (Cr(VI)) Content:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, Alkaline Digestion Method Was Used US EPA3060A And Determined By UV-Visible Spectrophotometry.

Tested Component	Result (mg/kg)	IKEA's Requirement (mg/kg)
(1)	<1	100

Remark: mg/kg = milligram per kilogram

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TESTS CONDUCTED:

5 19 Toxic Elements Migration Test:

As Per IKEA Specification IOS-MAT-0054 Version No. AA-92520-11, EN 71 Part 3:2013 + A1:2014 / EN 71 Part 3:2013 + A3:2018 Was Used.

Category (III): Scraped-off toy material

	Result In mg/kg (1)	Limit In mg/kg
Aluminium (Al)	< 300	70000
Antimony (Sb)	< 10	560
Arsenic (As)	< 10	47
Barium (Ba)	< 10	18750
Boron (B)	< 50	15000
Cadmium (Cd)	< 5	17
Chromium (III) (Cr III) ++	<10	460
Chromium (VI) (Cr VI) ++	< 0.025	0.2
Cobalt (Co)	< 10	130
Copper (Cu)	< 10	7700
Lead (Pb)	< 10	23
Manganese (Mn)	< 10	15000
Mercury (Hg)	< 10	94
Nickel (Ni)	< 10	930
Selenium (Se)	< 10	460
Strontium (Sr)	< 100	56000
Tin (Sn)	< 4	180000
Organic tin ++	< 2.0	12
Zinc (Zn)	< 100	46000

19 Toxic Elements Migration Test (Cont'd)

Remark: mg/kg = milligram per kilogram
++ = Unless the test results were marked with "#" or "Δ", Chromium (III) & Chromium (VI) and Organic tin contents were not directly determined and were derived from migration results of total chromium and tin respectively.
- Organic tin test result was expressed as tributyl tin.

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TESTS CONDUCTED:

6 Extractable Heavy Metals:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, With Reference To EN 16711-2, By Inductively Coupled Argon Plasma (ICP) And Atomic Absorption Spectrophotometric (AAS) Analysis.

	Detection Limit In mg/kg	Result in mg/kg (1)	Requirement In mg/kg
Sol. Arsenic (As)	0.1	<0.1	0.2
Sol. Antimony (Sb)	1.0	<1	40.0
Sol. Lead (Pb)	0.1	<0.1	0.2
Sol. Cadmium (Cd)	0.03	<0.03	0.1
Sol. Chromium (Cr)	0.5	<0.5	1.0@
Sol. Mercury (Hg)	0.01	<0.01	0.02
Sol. Nickel (Ni)	0.3	<0.3	1.0
Sol. Copper (Cu)	1.0	<1	20.0
Sol. Cobalt (Co)	0.3	<0.3	1.0

Remark: mg/kg = milligram per kilogram
Sol. = Soluble

7 Organotin Content:

As Per IKEA Specification No. IOS-MAT-0010 Version No. AA-10911-14, By ISO/TS 16179 And Followed By Gas Chromatography Mass Spectrometric (GC/MS) Analysis.

Compound	Result In ppm (1)	IKEA's Requirement In ppm (Max.)
Monobutyltin (MBT)	<0.05	-
Monooctyltin (MOT)	<0.05	-
Dibutyltin (DBT)	<0.05	0.20
Dioctyltin (DOT)	<0.05	-
Tributyltin (TBT)	<0.05	0.20
Triphenyltin (TPhT)	<0.05	-
Tricyclohexyltin (TCyT)	<0.05	-
Tetrabutyltin (TeBT)	<0.05	-
Dipropyltin (DProT)	<0.05	-
Diphenyltin (DPhT)	<0.05	-
Sum of All Compounds	<0.05	2.5

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Remark : ppm = parts per million = mg/kg

TESTS CONDUCTED:

8 Organotin Content:

As Per IKEA Specification IOS-MAT-0054 Version No. AA-92520-11, By ISO/TS 16179 And Gas Chromatography Mass Spectrometric (GC/MS) Analysis.

Compound	Result In ppm	Requirement In ppm (Max.)
	(1)	
Monobutyltin (MBT)	<0.05	--
Monooctyltin (MOT)	<0.05	--
Dibutyltin (DBT)	<0.05	0.10
Dioctyltin (DOT)	<0.05	--
Tributyltin (TBT)	<0.05	0.10
Triphenyltin (TPhT)	<0.05	--
Tricyclohexyltin (TCyT)	<0.05	--
Tetrabutyltin (TeBT)	<0.05	--
Dipropyltin (DProT)	<0.05	--
Diphenyltin (DPhT)	<0.05	--
Sum Of All	<0.05	2.5

Organotin Content (Cont'd)

Remark : ppm = parts per million = mg/kg

9 Flame Retardants Content:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, A Combination Of X-Ray Fluorescence Spectroscopy, Inductively Coupled Argon Plasma Spectrometry, Gas Chromatographic - Mass Spectrometry (GC-MS) And High Performance Liquid Chromatographic (HPLC) Techniques Was Used.

	Result In ppm	Requirement In ppm
	(1)	
I. Antimony		
Antimony	250*	200^ (Max.)
II. Brominated Flame Retardants		
Polybrominated Biphenyls (PBB)	< 5	--
Polybrominated Diphenyl Ethers (PBDE)	< 5	--
Sum of PBB and PBDE	< 5	100 (Max.)
III. Chlorinated Paraffins		

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TESTS CONDUCTED:

Short Chain Chlorinated Paraffin (C10-C13) Medium Chain Chlorinated Paraffin (C14-C17) Long Chain Chlorinated Paraffin (C18-C28)	< 100	100 (Max.)
IV. Flame Retardants (TEPA, TDCP, TCEP And TPP)		
Tris-(aziridinyl)-phosphine oxide (TEPA)	< 10	--
Tris(1,3-dichloro-2-propyl) phosphate (TDCP)	< 10	--
Tris(2-chloroethyl) phosphate (TCEP)	< 10	--
Triphenyl phosphate (TPP)	< 10	--
Sum of flame retardants	< 10	200 (Max.)

Remark : ppm = parts per million = mg/kg
*** = Failed item**
^ = This limit value does not refer to Antimony as residele in polyester due to production process ctypically up to 400 mg/kg, without connection to Flame Retardants use.

10 Flame Retardants Content:

As per IKEA Specification IOS-MAT-0054 Version No. AA-92520-11, a combination of X-Ray Fluorescence Spectroscopy, Inductively Coupled Argon Plasma Spectrometry, Gas Chromatographic - Mass Spectrometry (GC-MS) and High Performance Liquid Chromatographic (HPLC) Techniques was used.

	Result In ppm	Requirement In ppm
	(1)	
I. Antimony		
Antimony	250	200^ (Max.)
II. Brominated Flame Retardants		
Polybrominated Biphenyls (PBB)	< 5	--
Polybrominated Diphenyl Ethers (PBDE)	< 5	--
Sum of PBB and PBDE	< 5	100 (Max.)
III. Chlorinated Paraffins		
Short Chain Chlorinated Paraffin (C10-C13)	< 100	100 (Max.)
IV. Flame Retardants (TEPA, TPP, TDCP, TCPP, TCEP and TCP)		
Tris(aziridinyl) phosphine oxide (TEPA)	< 10	--
Triphenyl phosphate (TPP)	< 10	--
Sum of flame retardants	< 10	200 (Max.)
Tris(1,3-dichloro-2-propyl) phosphate (TDCP)	< 5	5 (Max.)
Tris (2-chloropropyl) phosphate (TCPP)	< 5	5 (Max.)
Tris(2-chloroethyl) phosphate (TCEP)	< 5	5 (Max.)
Tri-o-cresyl phosphate (TCP)	< 5	10 (Max.)

Remark: ppm = parts per million = mg/kg
- Other flame retardants were not tested

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^ This limit value does not refer to antimony as a residue in polyester due to production process (typically up to 400 mg/kg), without connection to flame retardant use.

TESTS CONDUCTED:

11 Alkylphenolethoxylates (APEO), Alkylphenols (AP) And Alkylphenol Phosphites Content:

As Per IKEA Specification No. IOS-MAT-0010 Version No. AA-10911-14, By EN ISO 18254-1, Solvent Extraction Was Used And Followed By Liquid Chromatographic - Mass Spectrometric (LC-MS) Analysis.

For Textile Materials

Compound	Result In ppm	IKEA Requirement In ppm (max.)
	(1)	
Nonylphenols (NP)	<10	--
Octylphenols (OP)	<10	--
Nonylphenolethoxylates (NPEO)	<10	--
Octylphenolethoxylates (OPEO)	<10	--
Sum Of All	<10	100

Remark : ppm = parts per million = mg/kg
Detection Limit = 10 ppm

12 Migration Of Bisphenol A, Bisphenol S And Bisphenol F:

As Per IKEA Specification IOS-MAT-0010 Version No. AA-10911-14, EN 14372 Was Used.

Tested Compounds	Result In mg/L	Requirement In mg/L (Max.)
	(1)	
Bisphenol A	<0.01	--
Bisphenol S	<0.01	--
Bisphenol F	<0.01	--
Sum of Bisphenol A, Bisphenol S and Bisphenol F	<0.03	0.60

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TESTS CONDUCTED:

13 Formaldehyde Content:

As Per IKEA Specification No. IOS-MAT-0010 Version No. AA-10911-14, ISO 14184-1 Was Used And Followed By Spectrometric Analysis.

Tested Component	Result In ppm	IKEA's Requirement In ppm (Max.)
(1)	< 10	75

Remark : ppm = parts per million = mg/kg
Detection Limit = 10 ppm

14 Formaldehyde Content:

As Per IKEA Specification No. IOS-MAT-0054 Version No. AA-92520-11, ISO 14184-1 Was Used, Followed By Spectrometric Analysis.

Tested Component	Result (ppm)	IKEA's Requirement (ppm)
(1)	< 10	20 (max.)

Remark: ppm = parts per million = mg/kg

Date Sample Received : February 15, 2019
Testing Period : February 15, 2019 to March 04, 2019

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END OF REPORT

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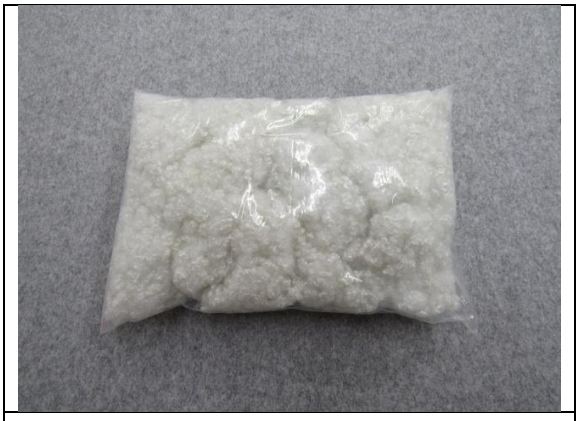
PRODUCT PHOTO



EXH 1

Tested component:
(1) White Polyester Stapple Fiber

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