



Hong Kong Government Recognized Service Supplier
Approved Laboratory of The Woolmark Company

Members of :

American National Standards Institute
American Society for Testing and Materials
British Standards Institute

Hong Kong Association for Testing, Inspection and Certification Limited
Hong Kong Toys Council

TEST REPORT

NUMBER: HKGH00910515

APPLICANT: KNIGHTWEAVER GAMES LLC
5190 INGERSOLL PLACE
BOULDER CO 80303
USA
ATTN: DANIEL WEAVER

DATE: Sep 08, 2009

SAMPLE DESCRIPTION:

SIX (6) SETS OF SUBMITTED SAMPLES SAID TO BE :

ITEM NAME : **PATCHWORD.**

LABELLED AGE GROUP : 7+.

PACKAGING PROVIDED : YES.

COUNTRY OF ORIGIN : CHINA.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

FOR AND ON BEHALF OF :
INTERTEK TESTING SERVICES HK LTD.

KAREN S.C. NG
GENERAL MANAGER





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CONCLUSION:

<u>TESTED SAMPLES</u>	<u>STANDARD - U.S. ASTM F963-08</u>	<u>RESULT</u>
SUBMITTED SAMPLE SETS	PHYSICAL AND MECHANICAL TESTS	PASS

FLAMMABILITY TEST OF MATERIALS OTHER THAN TEXTILE MATERIALS	PASS
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TOXIC ELEMENTS TEST	NOT APPLICABLE
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<u>TESTED SAMPLES</u>	<u>STANDARD - U.S. CFR TITLE 16</u>	<u>RESULT</u>
SUBMITTED SAMPLE SETS	(CPSA REGULATIONS) MECHANICAL AND PHYSICAL TESTS	PASS

PART 1500.3(c)(6)(vi) FLAMMABILITY TEST ON RIGID AND PLIABLE SOLIDS	PASS
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<u>TESTED SAMPLES</u>	<u>STANDARD</u>	<u>RESULT</u>
TESTED COMPONENTS OF SUBMITTED SAMPLE SETS	U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R. 4040) TITLE I, SECTION 101 FOR TOTAL LEAD CONTENT IN NON-SURFACE COATING MATERIALS (SUBSTRATE)	PASS

SUBMITTED SAMPLE SETS	U.S. CODE OF FEDERAL REGULATIONS TITLE 16 CFR 1303 FOR TOTAL LEAD CONTENT IN SURFACE COATING	NOT APPLICABLE
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U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R. 4040) TITLE I, SECTION 101 FOR TOTAL LEAD CONTENT IN SURFACE COATING	NOT APPLICABLE
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TO BE CONTINUED

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CONCLUSION:

<u>TESTED SAMPLES</u>	<u>STANDARD</u>	<u>RESULT</u>
TESTED COMPONENTS OF SUBMITTED SAMPLE SETS	U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R.4040)TITLE I, SECTION 108 REQUIREMENT ON PHTHALATE	PASS
	CALIFORNIA HEALTH AND SAFETY CODE, PART 3 OF DIVISION 104, CHAPTER 11 REQUIREMENT ON PHTHALATE (AB1108).	PASS
	MODEL TOXICS IN PACKAGING LEGISLATION (PACKAGING MATERIALS) FOR TOXIC ELEMENTS TEST	PASS

REMARK :

THE PRODUCER'S/DISTRIBUTOR'S NAME WAS FOUND ON THE PACKAGING. HOWEVER AS SPECIFIED
IN SECTION 7.1 OF U.S. ASTM F963-08, THE FINAL PRODUCT OR ITS PACKAGING MUST ALSO
BE MARKED WITH THE ADDRESS.

AS REQUESTED BY THE APPLICANT, THE NORMAL AND REASONABLY FORESEEABLY USE AND ABUSE
TEST WAS NOT CONDUCTED ON THE SUBMITTED SAMPLE.

FOR AND ON BEHALF OF :
INTERTEK TESTING SERVICES HK LTD.

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TESTS CONDUCTED

1 PHYSICAL AND MECHANICAL TESTS

AS PER ASTM STANDARD CONSUMER SAFETY SPECIFICATION FOR TOY SAFETY F963-08.

APPLICANT'S SPECIFIED AGE GROUP FOR TESTING : FOR AGES OVER 7 YEARS.

THE SUBMITTED SAMPLES WERE UNDERGONE THE USE AND ABUSE TESTS IN ACCORDANCE WITH THE FEDERAL HAZARDOUS SUBSTANCES ACT (FHSA), TITLE 16, CODE OF FEDERAL REGULATIONS : -

<u>TEST</u>	<u>FHSA</u>	<u>PARAMETER</u>
IMPACT TEST	SECTION 1500.53(b)	4 X 3.0 ft
TORQUE TEST	SECTION 1500.53(e)	4 in-lbf
TENSION TEST	SECTION 1500.53(f)	15 lbf
COMPRESSION TEST	SECTION 1500.53(g)	30 lbf

<u>SECTION</u>	<u>TESTING ITEMS</u>	<u>ASSESSMENT</u>
4.1	MATERIAL QUALITY (VISUAL CHECK ON CLEANINGLESS)	P
4.5	SOUND-PRODUCING TOYS	NA
4.6.1	TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS (SMALL OBJECTS)	NA
4.6.2	MOUTH-ACTUATED TOYS	NA
4.6.3	TOYS AND GAMES FOR 36 MONTHS TO 72 MONTHS (SMALL PART WARNING)	NA
4.7	ACCESSIBLE EDGES	P
4.8	PROJECTIONS	NA
4.9	ACCESSIBLE POINTS	P
4.10	WIRES OR RODS	NA
4.11	NAILS AND FASTENERS	NA
4.12	PACKAGING FILM	NA
4.13	FOLDING MECHANISMS AND HINGES	NA
4.14	CORDS AND ELASTICS	NA
4.15	STABILITY AND OVER-LOAD REQUIREMENTS	NA
4.16	CONFINED SPACES	NA
4.17	WHEELS, TIRES AND AXLES	NA
4.18	HOLES, CLEARANCE, AND ACCESSIBILITY OF MECHANISMS	NA
4.19	SIMULATED PROTECTIVE DEVICES, SUCH AS HELMETS, HATS AND GOGGLES	NA
4.20	PACIFIERS	NA
4.21	PROJECTILE TOYS	NA
4.22	TEETHERS AND TEETHING TOYS	NA
4.23	RATTLES	NA
4.24	SQUEEZE TOYS	NA
4.25	BATTERY-OPERATED TOYS	NA
4.26	TOYS INTENDED TO BE ATTACHED TO A CRIB OR PLAYPEN	NA
4.27	STUFFED AND BEANBAG-TYPE TOYS	NA





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TESTS CONDUCTED

3 TOXIC ELEMENTS ANALYSIS

AS PER SECTION 4.3.5 OF THE ASTM STANDARD CONSUMER SAFETY SPECIFICATION ON TOY SAFETY F963-08, ACID DIGESTION AND EXTRACTION METHODS WERE USED AND TOXIC ELEMENTS CONTENT WERE DETERMINED BY INDUCTIVELY COUPLED ARGON PLASMA SPECTROMETRY.

REMARK : SINCE NO SCRAPABLE SURFACE COATING WAS FOUND ON THE SUBMITTED SAMPLE, THE TESTING SCOPE OF ASTM F963-08 FOR TOXIC ELEMENTS TEST WAS NOT APPLICABLE TO THE SUBMITTED SAMPLE.

DATE SAMPLE RECEIVED : SEP 01, 2009
 TESTING PERIOD : SEP 01, 2009 TO SEP 05, 2009

4 PHYSICAL AND MECHANICAL TEST

AS PER U.S. CODE OF FEDERAL REGULATIONS TITLE 16 PART 1500.50, THE HAZARDS OF SHARP POINTS, SHARP EDGE AND SMALL PARTS ARE ASSESSED BOTH BEFORE AND AFTER APPLICABLE USE AND ABUSE TESTS.

APPLICANT'S SPECIFIED AGE GROUP FOR TESTING : FOR AGES OVER 7 YEARS.

	<u>NO. OF SAMPLE TESTED</u>	<u>SHARP POINT (1500.48)</u>	<u>SHARP EDGE (1500.49)</u>	<u>SMALL PART (1501)</u>
AS RECEIVED	2	P	NA	NA
IMPACT (1500.53(b))	1	P	NA	NA
FLEXURE (1500.53(d))	0	NA	NA	NA
TORQUE (1500.53(e))	1	P	NA	NA
TENSION (1500.53(f))	1	P	NA	NA
COMPRESSION (1500.53(g))	1	P	NA	NA

REMARK : P = PASS
 NA = NOT APPLICABLE

DATE SAMPLE RECEIVED : SEP 01, 2009
 TESTING PERIOD : SEP 01, 2009 TO SEP 04, 2009

5 FLAMMABILITY TEST

AS PER U.S. CODE OF FEDERAL REGULATIONS TITLE 16 PART 1500.44 FOR RIGID AND PLIABLE SOLIDS.

REMARK : IGNITED BUT SELF-EXTINGUISHED BEFORE BURN RATE COULD BE DETERMINED

DATE SAMPLE RECEIVED : SEP 01, 2009
 TESTING PERIOD : SEP 01, 2009 TO SEP 04, 2009





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TESTS CONDUCTED

6 TOTAL LEAD (Pb) CONTENT IN NON-SURFACE COATING MATERIALS (SUBSTRATE)

AS PER U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R. 4040), TITLE I, SECTION 101 FOR CHILDREN'S PRODUCTS CONTAINING LEAD, ACID DIGESTION METHOD WAS USED AND TOTAL LEAD CONTENT WAS DETERMINED BY INDUCTIVELY COUPLED ARGON PLASMA SPECTROMETRY.

<u>TESTED COMPONENT</u>	<u>RESULT IN ppm</u>	<u>LIMIT IN ppm</u>
(1)	<10	300
(2)	<10	300

AS OF AUGUST 14, 2011, THE LIMIT FOR TOTAL LEAD CONTENT WILL BE LOWERED TO 100 ppm UNLESS THE CPSC DETERMINES THAT A LIMIT OF 100 ppm IS NOT TECHNOLOGICALLY FEASIBLE FOR A PRODUCT OR PRODUCT CATEGORY.

REMARK :

ppm = PARTS PER MILLION

< = LESS THAN

TESTED COMPONENTS :

- (1) WOOD (WOODEN HOLDER).
- (2) WHITE PAPER CARD WITH INACCESSIBLE COATINGS AND TRANSPARENT PLASTIC COVER (CARDS).

DATE SAMPLE RECEIVED : SEP 01, 2009

TESTING PERIOD : SEP 01, 2009 TO SEP 05, 2009

7 TOTAL LEAD (Pb) CONTENT IN SURFACE COATING

AS PER U.S. CODE OF FEDERAL REGULATIONS TITLE 16 CFR 1303 AND U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R. 4040), TITLE I, SECTION 101 FOR CHILDREN'S PRODUCTS CONTAINING LEAD, ACID DIGESTION METHOD WAS USED AND TOTAL LEAD CONTENT WAS DETERMINED BY INDUCTIVELY COUPLED ARGON PLASMA SPECTROMETRY.

REMARK : SINCE NO SCRAPABLE SURFACE COATING WAS FOUND ON THE SUBMITTED SAMPLE, THE TESTING SCOPE WAS NOT APPLICABLE TO THE SUBMITTED SAMPLE.

DATE SAMPLE RECEIVED : SEP 01, 2009

TESTING PERIOD : SEP 01, 2009 TO SEP 05, 2009





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TESTS CONDUCTED

8 PHthalate Content Test

WITH REFERENCE TO ASTM D3421, BY GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC (GC-MS) ANALYSIS.

	<u>RESULT (% , w/w)</u>	<u>LIMIT (% , w/w)</u> <u>(MAX.)</u>
DIBUTYL PHTHALATE (DBP)	<0.01	0.1
DIETHYL HEXYL PHTHALATE (DEHP)	<0.01	0.1
BENZYL BUTYL PHTHALATE (BBP)	<0.01	0.1

	<u>RESULT (% , w/w)</u>	<u>LIMIT (% , w/w)</u> <u>(MAX.)</u>
DI-ISO-NONYL PHTHALATE (DINP)	<0.01	0.1
DI-N-OCTYL PHTHALATE (DNOP)	<0.01	0.1
DI-ISO-DECYL PHTHALATE (DIDP)	<0.01	0.1

REMARK : THE ABOVE LIMIT WAS QUOTED ACCORDING TO US CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R.4040) FOR PROHIBITION ON SALE OF CERTAIN PRODUCTS CONTAINING SPECIFIED PHTHALATES.

DETECTION LIMIT = 0.01% (w/w)
< = LESS THAN

TESTED COMPONENT :

WHITE PAPER CARD WITH INACCESSIBLE COATING AND TRANSPARENT PLASTIC FILM COVER (CARDS).

DATE SAMPLE RECEIVED : SEP 01, 2009

TESTING PERIOD : SEP 01, 2009 TO SEP 03, 2009





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TESTS CONDUCTED

9 PHthalate Content Test

WITH REFERENCE TO ASTM D3421, BY GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC (GC-MS) ANALYSIS.

	<u>RESULT (% , w/w)</u>	<u>LIMIT (% , w/w)</u> <u>(MAX.)</u>
DIBUTYL PHTHALATE (DBP)	<0.01	0.1
DIETHYL HEXYL PHTHALATE (DEHP)	<0.01	0.1
BENZYL BUTYL PHTHALATE (BBP)	<0.01	0.1

	<u>RESULT (% , w/w)</u>	<u>LIMIT (% , w/w)</u> <u>(MAX.)</u>
DI-ISO-NONYL PHTHALATE (DINP)	<0.01	0.1
DI-N-OCTYL PHTHALATE (DNOP)	<0.01	0.1
DI-ISO-DECYL PHTHALATE (DIDP)	<0.01	0.1

REMARK : THE ABOVE LIMIT WAS QUOTED ACCORDING TO CALIFORNIA HEALTH AND SAFETY CODE, PART 3 OF DIVISION 104, CHAPTER 11 PROHIBITING THE SALES OF TOYS AND CHILD CARE ARTICLES MADE WITH PHTHALATES (AB1108).

DETECTION LIMIT = 0.01% (w/w)
< = LESS THAN

TESTED COMPONENT :

WHITE PAPER CARD WITH INACCESSIBLE COATING AND TRANSPARENT PLASTIC FILM COVER (CARDS).

DATE SAMPLE RECEIVED : SEP 01, 2009

TESTING PERIOD : SEP 01, 2009 TO SEP 03, 2009





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10 TOXIC ELEMENTS ANALYSIS

AS PER MODEL TOXICS IN PACKAGING LEGISLATION REQUIREMENT OF PACKAGING AND PACKAGING COMPONENTS, ACID DIGESTION METHOD WAS USED AND TOXIC ELEMENTS CONTENTS WERE DETERMINED BY INDUCTIVELY COUPLED ARGON PLASMA SPECTROMETRY, AND HEXAVALENT CHROMIUM CONTENT WAS DETERMINED BY UV-VISIBLE SPECTROPHOTOMETRY.

	<u>RESULT IN ppm</u>	<u>LIMIT (ppm)</u>
LEAD (Pb)	<5	--
CADMIUM (Cd)	<5	--
MERCURY (Hg)	<5	--
CHROMIUM VI (Cr (VI))	<1	--
SUM OF Pb, Cd, Hg and Cr (VI)	<16	100

ppm = PARTS PER MILLION

< = LESS THAN

TESTED COMPONENT : TRANSPARENT PLASTIC FILM (PACKAGING).

DATE SAMPLE RECEIVED : SEP 01, 2009

TESTING PERIOD : SEP 01, 2009 TO SEP 05, 2009

END OF REPORT

