



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: HKGH01260561

Applicant: YIU WING (HONG KONG) INDUSTRIAL LIMITED  
RM 11 3/F SING WIN FTY BLDG  
15-17 SHING YIP ST  
KWUN TONG KLN  
HK

Date: Jan 06, 2012

Attn: JIMMY CHENG

Sample Description:

One (1) submitted sample said to be **PP plastic bag.**

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Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

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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 Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample	U.S. Consumer Product Safety Improvement Act 2008 Title I, Section 108 for Phthalate content	Pass
Submitted sample	Phthalates content requirement in Annex XVII Items 51 & 52 of the REACH Regulation (EC) no. 1907/2006 & amendment no. 552/2009 (formerly known as Directive 2005/84/EC)	Pass
Submitted sample	Model Toxics in Packaging Legislation (packaging materials) for toxic elements test	Pass
	94/62/EC and amendment 2004/12/EC & 2005/20/EC Directive (packaging waste) for toxic elements test	Pass
	U.S. F.D.A. Regulation 21 CFR Part 177.1520 Clauses (c)(1.1a and 1.1b) on Polypropylene	Pass
	European Commission Regulation No. 10/2011 and Regulation 1935/2004 on Overall Migration	Pass
	European Commission Regulation No. 10/2011 Annex II and Regulation 1935/2004 on Specific Migration of Heavy Metal Content	Pass
	Butylated hydroxytoluene (BHT) content	See details enclosed
	SVHC Screening Test	See details enclosed
	With reference to test method of IEC 62321 edition 1.0 : 2008 and maximum concentration limits quoted from RoHS Directives 2002/95/EC and amendment 2005/618/EC	Pass

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**Labelling recommendation :**

Food type : All aqueous and acidic foods and alcoholic foods and fatty foods.

**Use Condition :**

Temperature between 70°C and 100°C for less than 15 minutes and room temperature or below storage for unspecified period.

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For and on behalf of :  
Intertek Testing Services HK Ltd.

Karen S.C. Ng  
General Manager





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Tests Conducted

1 Phthalate Content Test

As per Standard Operating Procedure for Determining Phthalates, test method CPSC-CH-C1001-09.3 was used and phthalate content was determined 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
Diisononyl phthalate (DINP)	<0.01	0.1
Di-n-octyl phthalate (DnOP)	<0.01	0.1
Diisodecyl phthalate (DIDP)	<0.01	0.1

Remark : The above limit was quoted according to US Consumer Product Safety Improvement Act 2008 for prohibition on sale of certain products containing specified phthalates.

< = Less than

Date sample received : Dec 14, 2011  
 Testing period : Dec 14, 2011 to Dec 19, 2011

2 Phthalate Content Test

With reference to EN14372, 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	--
Diethyl hexyl phthalate (DEHP)	<0.01	--
Benzyl butyl phthalate (BBP)	<0.01	--
Sum of DBP,DEHP & BBP	<0.01	0.1
Di-iso-nonyl phthalate (DINP)	<0.01	--
Di-n-octyl phthalate (DnOP)	<0.01	--
Di-iso-decyl phthalate (DIDP)	<0.01	--
Sum of DINP,DnOP & DIDP	<0.01	0.1

Remark : The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) no. 1907/2006 & amendment no. 552/2009 (formerly known as Directive 2005/84/EC) for phthalate content in toys and children articles.

< = Less than

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 Testing period : Dec 14, 2011 to Dec 19, 2011

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3 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

Date sample received : Dec 14, 2011  
Testing period : Dec 14, 2011 to Dec 20, 2011

4 Toxic Elements Analysis

As per 94/62/EC and amendment 2004/12/EC & 2005/20/EC Directive on packaging and packaging waste, 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 = part per million  
< = Less than

Date sample received : Dec 14, 2011  
Testing period : Dec 14, 2011 to Dec 20, 2011

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5 Test for F.D.A. Regulation on Polypropylene

As per the U.S.Food and Drug Administration 21 CFR Part 177.1520 Clauses (c)(1.1a and 1.1b) and (d) with modification on density and melting point.

	<u>Result</u>	<u>Limit</u>
(A) Density (By sink float method)	Complied	0.880 - 0.913
(B) Melting point, °C (By melting point apparatus)	170	160 - 180 (1.1a) 150 - 180 (1.1b)
(C) Maximum extractable fraction in n-hexane, % (w/w)	4.8	6.4
(D) Maximum extractable fraction in xylene, % (w/w)	7.6	9.8

Remark : < = Less than

Date sample received : Dec 14, 2011  
 Testing period : Dec 14, 2011 to Jan 04, 2012

6 Overall Migration Test for Plastic Food Contacting Materials/Articles

As per Commission Regulation (EU) No. 10/2011, selection of test condition & food simulants by 82/711/EEC, 85/572/EEC and its amendment.

I. Condition of contact in actual use :

Temperature between 70°C and 100°C for less than 15 minutes and room temperature or below storage for unspecified period.

II. Test Results :

<u>Food Simulant</u>	<u>Result (mg/dm<sup>2</sup>)</u>	<u>Limit (mg/dm<sup>2</sup>)</u>
3% (w/v) acetic acid	<1	10
10% (v/v) ethanol	2	10
Fatty food simulant	5	10

Remark : < = Less than

Date sample received : Dec 14, 2011  
 Testing period : Dec 14, 2011 to Jan 04, 2012

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Tests Conducted

7 Specific Migration of Heavy Metal for Plastic Food Contacting Materials/Articles

As per Commission Regulation (EU) No. 10/2011, selection of test condition & food simulants by 82/711/EEC, 85/572/EEC and its amendment and EN13130-1.

I. Condition of contact in actual use :

Temperature between 70°C and 100°C for less than 15 minutes and room temperature or below storage for unspecified period.

II. Test results :

<u>Food Simulant</u>	<u>Element</u>	<u>Result (mg/kg)</u>	<u>Limit (mg/kg)</u>
3% (w/v) acetic acid	Barium	<0.1	1 (max.)
	Cobalt	<0.03	0.05 (max.)
	Copper	<1	5 (max.)
	Iron	<5	48 (max.)
	Lithium	<0.1	0.6 (max.)
	Manganese	<0.1	0.6 (max.)
	Zinc	<5	25 (max.)

Remark : < = Less than

Date sample received : Dec 14, 2011  
Testing period : Dec 14, 2011 to Jan 04, 2012

8 Butylated Hydroxytoluene (BHT) Content

With reference to ASTM D4275-09, by Gas Chromatographic (GC) analysis.

Result : <1 ppm

Remark : < = Less than  
ppm = parts per million = mg/kg  
Detection limit = 1 ppm

Date sample received : Dec 14, 2011  
Testing period : Dec 14, 2011 to Dec 20, 2011

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Tests Conducted

9 SVHC Screening Test

By a combination of X-Ray Fluorescence Spectroscopy, Inductively Coupled Argon Plasma Spectrometry and Gas Chromatographic - Mass Spectrometry techniques.

Chemical Substances	EC No.	CAS No.	Results
Anthracene	204-371-1	120-12-7	<0.02% (w/w)
4,4'-Diaminodiphenylmethane	202-974-4	101-77-9	<0.02% (w/w)
Dibutyl phthalate (DBP)	201-557-4	84-74-2	<0.02% (w/w)
Cobalt dichloride Δ	231-589-4	7646-79-9	<0.02% (w/w)
Diarsenic pentaoxide Δ	215-116-9	1303-28-2	<0.02% (w/w)
Diarsenic trioxide Δ	215-481-4	1327-53-3	<0.02% (w/w)
Sodium dichromate Δ	234-190-3	7789-12-0, 10588-01-9	<0.02% (w/w)
5-Tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2	<0.02% (w/w)
Bis (2-ethylhexyl) phthalate (DEHP)	204-211-0	117-81-7	<0.02% (w/w)
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD)	247-148-4 and 221-695-9	25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	<0.02% (w/w)
Short chain chlorinated paraffin (C10-C13)	287-476-5	85535-84-8	<0.02% (w/w)
Bis (tributyltin) oxide Δ	200-268-0	56-35-9	<0.02% (w/w)
Lead hydrogen arsenate Δ	232-064-2	7784-40-9	<0.02% (w/w)
Triethyl arsenate Δ	427-700-2	15606-95-8	<0.02% (w/w)
Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	<0.02% (w/w)
Anthracene oil	292-602-7	90640-80-5	<0.02% (w/w)
Anthracene oil, anthracene paste, distn. lights	295-278-5	91995-17-4	<0.02% (w/w)
Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	<0.02% (w/w)
Anthracene oil, anthracene-low	292-604-8	90640-82-7	<0.02% (w/w)
Anthracene oil, anthracene paste	292-603-2	90640-81-6	<0.02% (w/w)
Diisobutyl phthalate (DIBP)	201-553-2	84-69-5	<0.02% (w/w)
2,4-Dinitrotoluene	204-450-0	121-14-2	<0.02% (w/w)
Lead chromate Δ	231-846-0	7758-97-6	<0.02% (w/w)
Lead chromate molybdate sulfate red Δ (C.I. pigment red 104)	235-759-9	12656-85-8	<0.02% (w/w)
Lead sulfochromate yellow Δ (C.I. pigment yellow 34)	215-693-7	1344-37-2	<0.02% (w/w)
Coal tar pitch, high temperature	266-028-2	65996-93-2	<0.02% (w/w)
Tris(2-chloroethyl)phosphate (TCEP)	204-118-5	115-96-8	<0.02% (w/w)
Aluminosilicate, refractory ceramic fibres Δ	--	Index number 650-017-00-8	<0.02% (w/w)
Zirconia aluminosilicate, refractory ceramic fibres Δ	--	Index number 650-017-00-8	<0.02% (w/w)
Acrylamide	201-173-7	79-06-1	<0.02% (w/w)
Trichloroethylene	201-167-4	79-01-6	<0.02% (w/w)
Boric acid Δ	233-139-2/ 234-343-4	10043-35-3, 11113-50-1	<0.02% (w/w)

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Chemical Substances	EC No.	CAS No.	Results
Disodium tetraborate, anhydrous Δ	215-540-4	1330-43-4, 1303-96-4, 12179-04-3	<0.02% (w/w)
Tetraboron disodium heptaoxide, hydrate Δ	235-541-3	12267-73-1	<0.02% (w/w)
Sodium chromate Δ	231-889-5	7775-11-3	<0.02% (w/w)
Potassium chromate Δ	232-140-5	7789-00-6	<0.02% (w/w)
Ammonium dichromate Δ	232-143-1	7789-09-5	<0.02% (w/w)
Potassium dichromate Δ	231-906-6	7778-50-9	<0.02% (w/w)
2-Ethoxyethanol	203-804-1	110-80-5	<0.02% (w/w)
2-Methoxyethanol	203-713-7	109-86-4	<0.02% (w/w)
Cobalt (II) diacetate Δ	200-755-8	71-48-7	<0.02% (w/w)
Cobalt (II) carbonate Δ	208-169-4	513-79-1	<0.02% (w/w)
Cobalt (II) dinitrate Δ	233-402-1	10141-05-6	<0.02% (w/w)
Cobalt (II) sulphate Δ	233-334-2	10124-43-3	<0.02% (w/w)
Chromium trioxide Δ	215-607-8	1333-82-0	<0.02% (w/w)
Acids generated from chromium trioxide and their oligomers Δ :			<0.02% (w/w)
Chromic acid	231-801-5	7738-94-5	
Dichromic acid	236-881-5	13530-68-2	
Oligomers of chromic acid and dichromic acid			
1-Methyl-2-pyrrolidone	212-828-1	872-50-4	<0.02% (w/w)
1,2-Benzenedicarboxylic acid, di-C <sub>6-8</sub> -branched alkyl esters, C7-rich (DIHP)	276-158-1	71888-89-6	<0.02% (w/w)
1,2-Benzenedicarboxylic acid, di-C <sub>7-11</sub> -branched and linear alkyl esters (DHNUP)	271-084-6	68515-42-4	<0.02% (w/w)
1,2,3-Trichloropropane	202-486-1	96-18-4	<0.02% (w/w)
2-Ethoxyethyl acetate (2-EEA)	203-839-2	111-15-9	<0.02% (w/w)
Hydrazine	206-114-9	7803-57-8, 302-01-2	<0.02% (w/w)
Strontium chromate Δ	232-142-6	7789-06-2	<0.02% (w/w)
Lead styphnateΔ	239-290-0	15245-44-0	<0.02 % (w/w)
Lead diazide, Lead azideΔ	236-542-1	13424-46-9	<0.02 % (w/w)
Lead dipicrateΔ	229-335-2	6477-64-1	<0.02 % (w/w)
Phenolphthalein	201-004-7	77-09-8	<0.02 % (w/w)
2,2'-Dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	<0.02 % (w/w)
N,N-dimethylacetamide	204-826-4	127-19-5	<0.02 % (w/w)
Trilead diarsenateΔ	222-979-5	3687-31-8	<0.02 % (w/w)
Calcium arsenateΔ	231-904-5	7778-44-1	<0.02 % (w/w)
Arsenic acidΔ	231-901-9	7778-39-4	<0.02 % (w/w)
Bis(2-methoxyethyl) ether	203-924-4	111-96-6	<0.02 % (w/w)
1,2-Dichloroethane	203-458-1	107-06-2	<0.02 % (w/w)
4-(1,1,3,3-Tetramethylbutyl)phenol; 4-tert-octyl phenol	205-426-2	140-66-9	<0.02 % (w/w)
2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	<0.02 % (w/w)
Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	<0.02 % (w/w)
Formaldehyde, oligomeric reaction products with aniline (technical MDA)	500-036-1	25214-70-4	<0.02 % (w/w)
Pentazine chromate octahydroxideΔ	256-418-0	49663-84-5	<0.02 % (w/w)
Potassium hydroxyoctaoxidizincatedichromateΔ	234-329-8	11103-86-9	<0.02 % (w/w)
Dichromium tris(chromate)Δ	246-356-2	24613-89-6	<0.02 % (w/w)

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Remark : SVHC = Substance of Very High Concern  
< = Less than  
Δ = Determination was based on elemental analysis.

The chemical substances listed in table above are the SVHC included in candidate list promulgated by European Chemicals Agency (ECHA) before and on Dec 19, 2011, which are defined in Article 57 of REACH Regulation (EC1907/2006).

REACH requirement: As per Article 33(1) of the REACH Regulation (EC1907/2006), recipients of product must be provided with information of safe use if any of the tested substances (SVHC) exceeded 0.1%(w/w). A product meets the requirement of Article 33(1) by default when no SVHC exceeds 0.1%(w/w).

Date sample received : Dec 14, 2011

Testing period : Dec 28, 2011 to Jan 03, 2012

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Tests Conducted

10 RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
	(1)
Cadmium (Cd) Content (mg/kg)	ND (<2)
Lead (Pb) Content (mg/kg)	ND (<2)
Mercury (Hg) Content (mg/kg)	ND (<2)
Chromium (VI) (Cr <sup>6+</sup> ) Content (mg/kg) (For Non-metal)	ND (<1)
Polybrominated Biphenyls (PBBs) (mg/kg)	
Monobromobiphenyl (MonoBB)	ND (<5)
Dibromobiphenyl (DiBB)	ND (<5)
Tribromobiphenyl (TriBB)	ND (<5)
Tetrabromobiphenyl (TetraBB)	ND (<5)
Pentabromobiphenyl (PentaBB)	ND (<5)
Hexabromobiphenyl (HexaBB)	ND (<5)
Heptabromobiphenyl (HeptaBB)	ND (<5)
Octabromobiphenyl (OctaBB)	ND (<5)
Nonabromobiphenyl (NonaBB)	ND (<5)
Decabromobiphenyl (DecaBB)	ND (<5)
Polybrominated Diphenyl Ethers (PBDEs) (mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND (<5)
Dibromodiphenyl Ether (DiBDE)	ND (<5)
Tribromodiphenyl Ether (TriBDE)	ND (<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND (<5)
Pentabromodiphenyl Ether (PentaBDE)	ND (<5)
Hexabromodiphenyl Ether (HexaBDE)	ND (<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND (<5)
Octabromodiphenyl Ether (OctaBDE)	ND (<5)
Nonabromodiphenyl Ether (NonaBDE)	ND (<5)
Decabromodiphenyl Ether (DecaBDE)	ND (<5)

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mg/kg = milligram per kilogram  
 < = Less than  
 ND = Not detected

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and Amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 edition 1.0 : 2008, by acid digestion and determined by ICP-OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 edition 1.0 : 2008, by acid digestion and determined by ICP-OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 edition 1.0 : 2008, by acid digestion and determined by ICP-OES	2 mg/kg
Chromium (VI) (Cr <sup>6+</sup> ) Content (For Non-Metal)	With reference to IEC 62321 edition 1.0 : 2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0 : 2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

Date sample received: Dec 14, 2011  
 Testing period: Dec 14, 2011 to Dec 20, 2011

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 End of report

