



COSMO GROUP ASIA

Technical Report: (8816)228-0161(R1)

Aug 25, 2016

Date Received: Aug 15, 2016

Page 1 of 37

COSMO GROUP ASIA
2508 PACIFIC PLAZA 410 DES VOEUX RD WEST

Sample Description:	LUNCH BAG	1) BLUE BAG	2) PINK BAG	3) RED BAG	4) YELLOW BAG	5) ORANGE BAG
Vendor:	N/A	Sample Size:	N/A			
Manufacturer:	N/A	Style No(s):	N/A			
Buyer:	N/A	SKN/SKU No.:	N/A			
Labeled Age Grade:	NOT PRESENT	PO No.:	N/A			
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A			
Client Specified Age Grade:	3+	Country of Origin:	N/A			
Grade:		Assortment No.:	N/A			
Tested Age Grade:	OVER 3 YEARS OF AGE	Test Finished Date:	AUG 25, 2016			
UPC Code:	N/A					
Test Starting Date:	AUG 15, 2016					

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The mechanical and physical properties requirements of the tested subclauses of the European Standard, "Safety of toys", EN71: Part 1:2014, clauses 1-6.
- The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2011+A1: 2014.
- The migration of certain elements in Category III - Scraped off toy material requirements of the European Standard, "Safety of Toys", EN 71 Part 3: 2013+A1:2014.

To be continued

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REMARK

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EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The total lead content in surface coating requirements of ASTM F963-11, "Standard consumer safety specification for toy safety", Section 4.3.5.1(1).
- The soluble heavy metals content in surface coating requirements of ASTM F963-11, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.1(2).
- The total lead content in substrate requirements of ASTM F963-11, "Standard consumer safety specification for toy safety", Section 4.3.5.2(2)(a).
- The soluble heavy metals content in substrate requirements of ASTM F963-11, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2(2)(b).
- The cadmium content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 23.
- The BBP, DBP and DEHP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 51.
- The DNOP, DINP and DIDP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 52.
- The listed aromatic amines (azocolourants) content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 43, Points 1 and 2.
- The migration of certain elements requirements of the AS/NZS ISO Standard, "Safety of toys", AS/NZS ISO 8124: Part 3: 2012.
- The heavy metals requirements of the European "Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste."

The sample(s) was tested to the following requirement(s) and the data provided is for informational purposes only:

- Colorfastness to perspiration performed according to ISO 105 E04.
- The colourfastness to rubbing of the BS EN ISO 105X12.
- Colour fastness to washing of the ISO 105 C06.A1S.

Note: At the request of the client, the sample(s) was evaluated for use by children 3+.

Note: At the request of the client, the EN71 Pt. 1-2014: clause 7 labeling requirement(s) was not evaluated for this submission.

Note: The composite test sample(s) of the submitted samples was prepared in the manner requested by the client, when subject to the test performed.



RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71 : Part 1 : 2014, CR 14379:2002 "Classification of toys-Guidelines" prepared by Technical Committee CEN TC 52 and Age Grade Determination Guidelines of the Consumer Product Safety Commission (CPSC).	
Note :	The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.
Note :	If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

EXPLANATION OF THE ABBREVIATIONS FOR PART 1, 2 & 6

Symbol	Explanation				
NM	The sample(s) DOES NOT MEET the requirement of this Subclause				
M	The sample(s) MEET the requirement of this Subclause				
N/A	Not Applicable				
NR	Not Requested				
NE	Not Evaluated				
NT	Not Tested				
NP	None Present				
P	Present				
R	Refer to Comment Section of this report				
Symbol	Language Present	Symbol	Language Present	Symbol	Language Present
B	Belgian language	G	German language	PR	Portuguese language
D	Danish language	GR	Greek language	S	Spanish language
E	English language	H	Dutch language	SD	Swedish language
F	Finnish language	I	Italian language	SZ	Swiss language
FR	French language	N	Norwegian language		

RESULTS:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 –2014)**

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy Bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	NA
4.10.1	Folding and sliding mechanisms	NA
4.10.2	Driving mechanisms	NA
4.10.3	Hinges	NA
4.10.4	Springs	NA
4.11	Mouth actuated toys and other toys intended to be put in the mouth	NA
4.12 & 7.3	Balloons	NA
4.13 & 7.9	Cord of toy kites and other flying toys	NA
4.14.1	Toys which a child can enter	NA
4.14.2 & 7.8	Masks and helmets	NA
4.15.1	Toys propelled by child	
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	NA
4.15.1.3	Toys propelled by child – Strength	NA
4.15.1.4	Toys propelled by child – Stability	NA
4.15.1.5	Toys propelled by child – Braking	NA
4.15.1.6	Toys propelled by child - Transmission	NA
4.15.1.7	Toys propelled by child – insertion mark	NA
4.15.1.8	Electrically-driven ride-on toys	NA
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	NA
4.15.2.3	Toy bicycles – Braking	NA
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	NA
4.15.4 & 7.16	Toys not propelled by child	NA
4.15.5 & 7.18	Toy scooters	NA
4.16	Heavy immobile toys	NA



RESULTS:

Subclause	Requirement	Result
4.17.1	Projectiles – General	NA
4.17.2	Projectiles toys without stored energy	NA
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.7	Bows and arrows	NA
4.18 & 7.4	Aquatic toys and inflatable toys	NA
4.19 & 7.13 & 7.14	Percussion caps	NA
4.20.2.1- 4.20.2.4, 4.20.2.6-4.20.2.7, 4.20.2.10	Acoustics	NA
* 4.20.2.5	Acoustics – Toys using headphones or earphones	NA
* 4.20.2.8	Acoustics – Pull-along or push toys	NA
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – Percussion toys & cap-firing toys	NA
* 4.20.2.12	Acoustics – Voice toys	NA
4.21	Toys containing a non-electrical heat source	NA
4.22 & 7.2	Small balls	NA
4.23	Magnet	
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	NA
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	NA
4.24	Yo-yo ball	NA
4.25	Toys attached to food	NA
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
5	Cleaning instruction for item intended for child under 3 years of age	NA
5.1	General	NA
5.1a	Small parts – as received	NA
5.1b	Small parts, sharp points, sharp edges – after tests	NA
5.1c	Cross section <2mm metal points & wires	NA
5.1e	Toys contain glue	NA
5.1f	Casing of toys	NA
5.2	Filings, coverings and seams	NA
5.3	Adhesion of plastic sheeting	NA
5.4 &	Cords on toys	NA
5.4(a)	Cords connected to self-retraction mechanism or in pull along toys	NA
5.4(b) & 7.22	Cords and chains that can form tangled loop or noose	NA
5.4(c) & 7.22	Fixed loop of cords or chains	NA



RESULTS:

Subclause	Requirement	Result
5.4(d)	Nooses	NA
5.4(e)	Self-retraction mechanism	NA
5.4(f) & 7.11	Toy across cradle, cot or perambulator	NA
5.4(g) & 7.22	Cords and chains with free end (exclude pull along toy)	NA
5.4(h)	Cords and chains with free end on pull along toy	NA
5.4(i) & 7.21	Electrical cables	NA
5.5 & 7.12	Liquid filled toys	NA
5.6	Electrically driven toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size	NA
5.9 & 7.17	Monofilament fibres	NA
5.10	Small balls	NA
5.11	Play figures	NA
5.12	Hemispheric shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
6	Packaging	NA
WARNINGS, INSTRUCTIONS FOR USE		
7	CE Mark	NT
7	Manufacturer name and address	NT
7	Importer name and address	NT
7	Product Identification	NT
7.1	General	NT
7.2	Toys not intended for children under 36 months	NT
7.5	Functional toys	NT



RESULTS:

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 1

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method
4.3	8.25.1	4.14.2	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.11, 8.12	4.17.3	8.24.1	5.3	8.4.2.1, 8.25
4.5	8.5, 8.7, 8.11, 8.12	4.15.1.3	8.11, 8.12, 8.21, 8.22	4.17.4	8.24.2	5.4	8.20, 8.36, 8.38, 8.39, 8.40
4.6	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.14	4.15.1.4	8.23.1	4.18	8.2, 8.3, 8.4.2.1	5.5	8.15
4.7	8.11	4.15.1.5	8.26.1	4.20	8.28	5.6	8.29
4.8	8.12, 8.13	4.15.1.8	8.29	4.21	8.30	5.8	8.16
4.9	8.4.2.3, 8.11, 8.12	4.15.2.4	8.26.2	4.22	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.32	5.10	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9, 8.32
4.10.1	8.18.2, 8.18.3	4.15.3	8.21, 8.23.1	4.23	8.2, 8.3, 8.4.2.1, 8.4.2.2, 8.5, 8.6, 8.7, 8.8, 8.34, 8.35	5.11	8.33
4.10.2	8.5, 8.6, 8.7, 8.11, 8.12	4.15.4	8.21, 8.23.1	4.24	8.37	5.12	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9,
4.11	8.2, 8.3, 8.4.2.1, 8.9, 8.17	4.15.5	8.11, 8.12, 8.21, 8.22, 8.26.3, 8.27	4.25	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32.1	5.13	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32
4.13	8.19	4.16	8.23.2	5.1	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.9, 8.11, 8.12		
4.14.1	8.31.1, 8.31.2	4.17.1	8.4.2.3				

RESULTS:

FLAMMABILITY (EN 71 PART 2: 2011+A1: 2014)

Subclause	Requirement	Result
4.1	Cellulose nitrate	NP
4.1	Surface flash on a piled surface	NA
*4.1	Flammable gases	NA
*4.1	Extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels	NA
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by child in play	NA
4.3	warning on product and packaging (10 - 30 mm/s)	NA
4.4	Toys intended to be entered by a child	NA
4.4	warning on product and packaging (10 – 30 mm/s)	NA
4.5	Soft-filled toys	M

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method
4.2.2	5.2	4.2.4	5.3	4.3	5.4	4.5	5.5
4.2.3	5.3	4.2.5	5.4	4.4	5.4	-	-

* Note: Subclause indicated with * are not accredited.



Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I001	White /blue coating	Surface of bag	1
I002	Green coating	Surface of bag	1,2
I003	Dark orange coating	Surface of bag	1
I004	White /pink coating	Surface of bag	2
I005	Purple coating	Surface of bag	2
I006	White /red coating	Surface of bag	3
I007	Black coating	Surface of bag	3,4,5
I008	White /yellow coating	Surface of bag	4
I009	White /orange coating	Surface of bag	5
I010	White plastic	Zipper	1,2
I011	Transparent green plastic	Zipper teeth	1,2
I012	Black plastic	Zipper teeth	3,4,5
I013	Black plastic	Buckle & zipper	1-5 3,4,5
I014	Black elastic band	Elastic band	1-5
I015	Black soft plastic	Elastic band	1-5
I016	Grey plastic	Back	1-5
I017	White foam	Lining	1-5
I018	Transparent plastic	Frame	1-5
I019	Blue thread/blue fabric	Bag	1
I020	Green thread/ dull green fabric	Zipper puller Edge	1,2 2
I021	Grey thread /green fabric	Binding of zipper	1-5 1,2
I022	Bright blue fabric	Belt & handle	1
I023	Orange fabric	Edge	1
I024	Black thread/black mesh	Back	1,2
I025	Pink thread/pink fabric	Bag	2
I026	Purple fabric	Ear	2
I027	Dull pink fabric	Belt & handle	2
I028	Red thread/red fabric	Bag	3
I029	Black thread/black fabric	Zipper & edge & ear Zipper & edge	3,4 5
I030	Black fabric	Binding of zipper	3,4,5
I031	Dull black fabric	Belt & handle	3,4,5
I032	Yellow thread/yellow fabric	Bag	4
I033	Orange thread/orange fabric	Bag	5
I034	White fabric	Ear	5
I035	White non-woven	Lining	1-5



Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I036	Blue /white coated blue fabric	Bag	1
I037	Green coated blue fabric	Bag	1,2 1
I038	Dark orange coated blue fabric	Bag	1
I039	Pink /white coated pink fabric	Bag	2
I040	Red /white coated red fabric	Bag	3
I041	Yellow /white coated yellow fabric	Bag	4
I042	Orange /white coated orange fabric	Bag	5
I043	Blue fabric	Bag	1
I044	Dull green fabric	Zipper puller & Ear Edge	1,2 1 2
I045	Green fabric	Binding of zipper	1,2
I046	Bright blue fabric	Belt & handle	1
I047	Orange fabric	Edge	1
I048	Black mesh	Back	1-5
I049	Black fabric	Elastic band	1-5
I050	Purple coated pink fabric	Bag	2
I051	Pink fabric	Bag	2
I052	Purple fabric	Ear	2
I053	Dull pink fabric	Belt & handle	2
I054	Black coated red fabric	Bag	3,4,5 3
I055	Red fabric	Bag	3
I056	Black fabric	Zipper & edge & ear	3
I057	Black fabric	Binding of zipper	3
I058	Dull black fabric	Belt & handle	3
I059	Yellow fabric	Bag	4
I060	Orange fabric	Bag	5
I061	Black /red printed white fabric	Sewn label	-
I062	Clear laminated multi color printed white paperboard	Instruction	-
I063	Transparent plastic	Bag	-



RESULTS:

Migration of Certain Elements – European Standard EN 71 Part 3: 2013+A1: 2014

Test Method: European Standard EN 71 Part 3: 2013+A1: 2014, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I001	I002	I003	I004	I005
Aluminium (Al)	70000	76	64	22	32	410
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2					
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	26	35	13	11	15
Zinc (Zn)	46000	56	56	37	33	20
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I006	I007	I008	I009	I010
Aluminium (Al)	70000	81	4	LT 2	54	240
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2					
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	22	10	31	55	LT 2
Zinc (Zn)	46000	61	14	65	140	2
Mass of trace amount (gram)		-	-	-	0.0763	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I011	I012	I013	I014	I016
Aluminium (Al)	70000	2	LT 2	2	2	10
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2					
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	LT 2	LT 2	LT 2	540	6
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I019	I020	I021	I022	I023
Aluminium (Al)	70000	4	4	3	3	3
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2					
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	3
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	5	7	4	3	5
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I024	I025	I026	I027	I028
Aluminium (Al)	70000	5	4	5	4	8
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2					
Copper (Cu)	7700	3	2	4	8	5
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	9	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	6	4	11	16	6
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Test Item(s)					
	Category III	I029	I030	I031	I032	I033	I034
Aluminium (Al)	70000	4	3	3	3	3	4
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2						
Copper (Cu)	7700	4	2	LT 2	2	2	3
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	3	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	6	4	6	6	5	7
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	PASS

mg/kg = milligrams per kilogram (ppm=parts per million) LT = Less Than

* = Average of duplicate analysis

Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg

= Verified results (see note)

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:

If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method

- Chromium VI: In house Ion-chromatography analysis.
- Organic tin: EN71 part 3:2013+A1:2014, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



RESULTS:

Total Lead Content in Surface Coating – ASTM International Standard ASTM F963-11, Section 4.3.5.1(1)

Test Method : ASTM International Standard ASTM F963-11, Section 8.3.1 and Annex A7.

Maximum Allowable Limit :	90 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001+I002	ND	mg/kg	PASS
I003+I004	ND	mg/kg	PASS
I005+I006	ND	mg/kg	PASS
I007+I008	ND	mg/kg	PASS
I009	ND	mg/kg	PASS

Note / key:

- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : 10



RESULTS:

Soluble Heavy Metals Content in Surface Coating – ASTM International Standard ASTM F963-11, Section 4.3.5.1(2)

Test Method : ASTM International Standard ASTM F963-11, Section 8.3.2 to 8.3.4.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit (mg/kg)	25	1000	75	60	60	90	60	500
Analytical Correction (%)	60	30	30	30	50	30	60	60

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
I001	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I002	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I003	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I004	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I005	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I006	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I007	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I008	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I009	ND	ND	ND	ND	ND	ND	ND	ND	0.0763	PASS

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
 Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
 ND = Not detected g = gram(s) % = percent
 mg/kg = milligram(s) per kilogram
 Detection Limit (mg/kg) : As : 2.5; Ba : 100; Cd : 7.5; Each (Cr, Hg, & Sb) : 6.0; Pb : 9.0; Se : 50



RESULTS:

Total Lead Content in Substrate – ASTM International Standard ASTM F963-11, Section 4.3.5.2(2)(a)

Test Method : ASTM International Standard ASTM F963-11, Section 8.3.1 and Annex A7.

Maximum Allowable Limit :	100 mg/kg
---------------------------	-----------

Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I010+I011+I012	ND	mg/kg	PASS
I013+I014	ND	mg/kg	PASS
I016+I017+I018	ND	mg/kg	PASS

Note / key:

- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : 10



RESULTS:

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
ND = Not detected g = gram(s) % = percent
mg/kg = milligram(s) per kilogram (ppm=parts per million)

Detection Limit (mg/kg) :

For Type I – As : 2.5; Ba : 100; Cd : 7.5; Each (Cr, Hg, & Sb) : 6.0; Pb : 9.0; Se : 50

For Type II – Each (As, Cr & Hg) : 2.5; Ba : 25; Cd : 5.0; Sb : 6.0; Pb : 9.0; Se : 50

Remark:

- Textiles (natural or synthetic) are exempted for lead content requirement according to clarification of Toy Industry Association for ASTM F963-11. The lead content analysis result of corresponding material herein is for client's reference only.



RESULTS:

Total Cadmium Content – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 23

Test Method : BS EN 1122: 2001, Method B or Acid digestion followed by Atomic Absorption Spectrophotometry or Inductively Coupled Plasma Spectrometry.

Maximum Allowable Limit :	Type I	Paints on Painted Article: 1000 mg/kg
	Type II	Plastics: 100 mg/kg
	Type III	Metals in Jewellery: 100 mg/kg

Test Item(s)	Type	Result	Unit	Conclusion
		Total Cadmium (Cd)		
I001+I002	I	ND	mg/kg	PASS
I003+I004	I	ND	mg/kg	PASS
I005+I006	I	ND	mg/kg	PASS
I007+I008	I	ND	mg/kg	PASS
I009	I	ND	mg/kg	PASS
I010+I011+I012	II	ND	mg/kg	PASS
I013+I014	II	ND	mg/kg	PASS
I016+I017+I018	II	ND	mg/kg	PASS
I035	II	ND	mg/kg	PASS

Note / key:

- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : 10



RESULTS:

BBP/DBP/DEHP Contents in Toys and Childcare Articles – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51

Test Method : Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

Test Parameter:	BBP	DBP	DEHP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001+I002+I003	ND	ND	ND	ND	PASS
I004+I005+I006	ND	ND	ND	ND	PASS
I007+I008+I009	ND	ND	ND	ND	PASS
I010+I011+I012	ND	ND	ND	ND	PASS
I013+I015	ND	ND	ND	ND	PASS
I016+I017+I018	ND	ND	ND	ND	PASS
I035	ND	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate DBP = Dibutyl phthalate DEHP = Di(2-ethylhexyl) phthalate
 ND = Not detected % = percent 10000 mg/kg = 1 %
 mg/kg = milligram(s) per kilogram
 Detection Limit (%) : Each 0.005



RESULTS:

DNOP/DINP/DIDP Contents in Toys and Childcare Articles which can be placed in the Mouth by the Children – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 52

Test Method : Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

Test Parameter:	DIDP	DINP	DNOP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001+I002+I003	ND	ND	ND	ND	PASS
I004+I005+I006	ND	ND	ND	ND	PASS
I007+I008+I009	ND	ND	ND	ND	PASS
I010+I011+I012	ND	ND	ND	ND	PASS
I013+I015	ND	ND	ND	ND	PASS
I016+I017+I018	ND	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate	DINP = Di-iso-nonyl phthalate	DIDP = Di-iso-decyl phthalate
ND = Not detected	% = percent	10000 mg/kg = 1 %
mg/kg = milligram(s) per kilogram		
Detection Limit (%) : Each 0.005		



RESULTS:

AROMATIC AMINES (AZOCOLOURANTS) CONTENT (European Regulation (EC) No. 1907/2006 REACH, Annex XVII, Item no. 43, Points 1 and 2)

Test Method: Quantification by Gas Chromatography/Mass Spectrometry (GC/MS)
 Additional chromatographic technique employed to confirm positive result by HPLC/TLC

Test Parameter:		Aromatic Amines (Azocolourants)		
Requirement:		30 mg/kg		
Test Item(s)	Test Method	Detected Amine Number	Concentration (mg/kg (ppm))	Conclusion
I036	II	-	ND	PASS
I037	II	-	ND	PASS
I038	II	-	ND	PASS
I039	II	-	ND	PASS
I040	II	-	ND	PASS
I041	II	-	ND	PASS
I042	II	-	ND	PASS
I043+I044+I045	II	-	ND	PASS
I046+I047+I048	II	-	ND	PASS
I049+I050	II	-	ND	PASS
I051+I052+I053	II	-	ND	PASS
I054+I055	II	-	ND	PASS
I056+I057+I058	II	-	ND	PASS
I059+I060	II	-	ND	PASS

ND = Not Detected (Detection Limit = 10 mg/kg (ppm))

ppm = parts per million

mg/kg = milligrams per kilogram

NR = Not Requested

* = The specimen is a minor component. As only a reduced mass (< 0.5 g) could be used for the test the result may have a greater uncertainty due to lower material homogeneity

Amine No. = Refer to List of Banned Amines for the description of the detected Amine.

Test Method I = European Standard EN 14362-1: 2012, Clauses 8, 9.2 and afterwards.

Test Method II = European Standard EN 14362-1: 2012, Clauses 8, 9.1, 9.3 and afterwards.

Test Method III = International Standard ISO 17234-1: 2015.

Remark:

The list of aromatic amines in azo colorants is summarized in table of Appendix.

The CAS-number 97-56-3 (no. 5) and 99-55-8 (no. 6) are further reduced to CAS-number 95-53-4 (no. 18) and 95-80-7 (no. 19), respectively.

The colorant(s) of Test Item(s), that are able to form 4-aminoazobenzene, is (are) able to generate aniline and 1,4-phenylenediamine under the condition of Test Method.

The absence of 4-aminoazobenzene is inferred by the absence of aniline and 1,4-phenylenediamine under the condition of Test Method.



RESULTS:

LIST OF BANNED AMINES		
Specified Amines		
Number	Chemical Name	CAS Number
1.	4-aminobiphenyl	92-67-1
2.	Benzidine	92-87-5
3.	4-chloro-o-toluidine	95-69-2
4.	2-naphthylamine	91-59-8
5.	o-aminoazotoluene	97-56-3
6.	5-nitro-o-toluidine	99-55-8
7.	4-chloroaniline	106-47-8
8.	4-methoxy-m-phenylenediamine	615-05-4
9.	4,4'-diaminodiphenylmethane	101-77-9
10.	3,3'-dichlorobenzidine	91-94-1
11.	3,3'-dimethoxybenzidine	119-90-4
12.	3,3'-dimethylbenzidine	119-93-7
13.	4,4'-methylenedi-o-toluidine	838-88-0
14.	p-cresidine	120-71-8
15.	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4
16.	4,4'-oxydianiline	101-80-4
17.	4,4'-thiodianiline	139-65-1
18.	o-toluidine	95-53-4
19.	4-methyl-m-phenylenediamine	95-80-7
20.	2,4,5-trimethylaniline	137-17-7
21.	o-anisidine	90-04-0
22.	4-amino azobenzene	60-09-3



RESULTS:

Migration of Certain Elements – Australian/New Zealand Standard AS/NZS ISO 8124 Part 3: 2012

Test Method : Australian/New Zealand Standard AS/NZS ISO 8124 Part 3: 2012, Section 8.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction (%)	60	30	30	30	50	30	60	60

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type I: Coatings										
I001	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I002	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I003	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I004	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I005	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I006	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I007	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I008	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I009	ND	ND	ND	ND	ND	ND	ND	ND	0.0763	PASS
Type II: Polymeric materials										
I010	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I011	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I012	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I013	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I014	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I016	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS



RESULTS:

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type IV: Textiles										
I019	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I020	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I021	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I022	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I023	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I024	ND	ND	ND	ND	ND	ND	9	ND	-	PASS
I025	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I026	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I027	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I028	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I029	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I030	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I031	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I032	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I033	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I034	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
 Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
 ND = Not detected g = gram(s) % = percent
 mg/kg = milligram(s) per kilogram
 Detection Limit (mg/kg) :
 For Type I to VII, IX & X - As 2.5; Ba 100; Cd 7.5; Each (Cr, Hg, & Sb) 6.0; Pb 9.0; Se 50
 For Type VIII - Each (As, Cr & Hg) 2.5; Ba 25; Cd 5.0; Sb 6.0; Pb 9.0; Se 50



RESULTS:

Heavy Metals Content in Packaging – European Council Directive 94/62/EC on Packaging and Packaging Waste

Test Item(s)	Result	Unit	Conclusion
I061	ND	mg/kg	PASS
I062	ND	mg/kg	PASS
I063	ND	mg/kg	PASS

Maximum Allowable Limit: Sum of Pb, Cd, Hg & CrVI: 100 mg/kg

Note / key:

- Pb = Lead
- Hg = Mercury
- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : Sum 20
- Cd = Cadmium
- CrVI = Hexavalent Chromium

Remark:

- Unless further specified, the reported result(s) of Test Item(s) was (were) performed by total metal(s) content analysis through complete decomposition.



RESULTS:

(ISO 105 E04)

Sample Description	Colour change	Colour staining						Conclusion
		Acetate	Cotton	Nylon	Polyester	Acrylic	Wool	
Required Limit	-	-						
Alkali								
Green zipper fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Red bandages	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Black zipper fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Blue bandages	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Black elastic bandages	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Black bandages	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Black fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Green fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Red fabric	4-5	4	4-5	4	4-5	4-5	4-5	Data
Purple fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Blue fabric	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data
Orange fabric	4-5	4	4-5	4	4-5	4-5	4-5	Data
Yellow fabric	4-5	4	4-5	4	4-5	4-5	4-5	Data
DK red fabric	4-5	4	4-5	4	4-5	4-5	4-5	Data
Black wesh	4-5	4-5	4-5	4-5	4-5	4-5	4-5	Data

Explanation of Colorfastness Results:

- 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 heavily stained



RESULTS:

(ISO 105X12)

Sample Description	Dry / Wet	Results	Limit	Conclusion
Green zipper fabric	Dary	4-5	-	Data
	Wet	4-5	-	Data
Red bandages	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black zipper fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Blue bandages	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black elastic bandages	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black bandages	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Green fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Red fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Purple fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Blue fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Orange fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Yellow fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Dk red fabric	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black mesh	Dry	4-5	-	Data
	Wet	4-5	-	Data

Explanation of Colourfastness Results:

- Grade 5 Negligible or no change
- Grade 4 Slightly changed
- Grade 3 Noticeably changed
- Grade 2 Considerably changed
- Grade 1 Much changed



**BUREAU
VERITAS**

COSMO GROUP ASIA
 Technical Report: **(8816)228-0161(R1)**
 Aug 25, 2016
 Page 33 of 37

RESULTS:

(ISO105C06-A1S)

Description	Result	Client Requirement	Rating
Green zipper fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Red bandages			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Black zipper fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Blue bandages			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Black elastic bandages			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data



**BUREAU
VERITAS**

COSMO GROUP ASIA
 Technical Report: **(8816)228-0161(R1)**
 Aug 25, 2016
 Page 34 of 37

RESULTS:

(ISO105C06-A1S)

Description	Result	Client Requirement	Rating
Black bandages			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Black fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Green fabric			
Colour Change	4-5	-	Data
Acetate	4	-	Data
Cotton	4-5	-	Data
Nylon	4	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Red fabric			
Colour Change	4-5	-	Data
Acetate	4	-	Data
Cotton	4-5	-	Data
Nylon	4	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Pueple fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data



**BUREAU
VERITAS**

COSMO GROUP ASIA
Technical Report: **(8816)228-0161(R1)**
Aug 25, 2016
Page 35 of 37

RESULTS:

(ISO105C06-A1S)

Description	Result	Client Requirement	Rating
Blue fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Orange fabric			
Colour Change	4-5	-	Data
Acetate	4	-	Data
Cotton	4-5	-	Data
Nylon	4	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Yellow fabric			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Dk red fabric			
Colour Change	4-5	-	Data
Acetate	4	-	Data
Cotton	4-5	-	Data
Nylon	4	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data
Black mesh			
Colour Change	4-5	-	Data
Acetate	4-5	-	Data
Cotton	4-5	-	Data
Nylon	4-5	-	Data
Polyester	4-5	-	Data
Acrylic	4-5	-	Data
Wool	4-5	-	Data



COSMO GROUP ASIA
Technical Report: **(8816)228-0161(R1)**
Aug 25, 2016
Page 36 of 37

RESULTS:

Explanation of Colourfastness Results:

Grade 5 Negligible or no change
Grade 4 Slightly changed
Grade 3 Noticeably changed
Grade 2 Considerably changed
Grade 1 Much changed

Remark: This report is to Supersede BV(Dong guan) report No. (8816)228-0161 dated on Aug 22, 2016.

RESULTS:



END OF REPORT