



DAP-PL-4094.00

Test Report No.: Q00025532a 001

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Client: On file

Test item: Toys

Identification/ Model No(s): 9" PUZZLE SPHERE 540 PIECES
 A1022_9, Blue Marble Earth (9" 540 pc)
 A1028_9, The Village (9" 540 pc)
 A1045_9, Cats in Flowers (9" 540 pc)
 A1092_9, Ocean World (9" 540 pc)
 A1384_9, Stars of Zodiac (9" 540 pc)

Sample Receiving date: 15 Apr. 2010

Delivery condition: Apparent good, Samples tested as received
Test specification:**Test result:**

- | | |
|---|------|
| 1. ASTM F963-08: Mechanical and physical | PASS |
| 2. ASTM F963-08: Flammability on solid and soft toys | PASS |
| 3. ASTM F963-08 and CPSIA Sect 101: Total lead content in paint and coating materials | PASS |
| 4. CPSIA Sect 101: Total lead content in substrate materials | PASS |
| 5. ASTM F963-08: Soluble heavy metal | PASS |
| 6. CPSIA Sect 108: Phthalates | PASS |
| 7. CPSIA Sect 103: Tracking label | PASS |

Other Information:

The labelled age grade of the item(s) : 12+

The appropriate age grade of the item(s) : For age 8 years and up

The item(s) was/ were tested for the age of over 8 years.

For and on behalf of**TÜV Rheinland (Hong Kong) Ltd.**

28 Apr. 2010

San Ho/ Manager

Date

Name/Position

Test result is drawn according to the kind and extent of tests performed.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.



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Material list:

Material No.	Material	Color	Location
1	Whole Product	Multi-color	Whole Product
2	Coating	Multi-color of Blue/ Red/ Green	Puzzles & Assembly Guide
3	Plastic w/ Printing	White w/ Black Printing	Puzzles
4	Plastic	Snow White	Assembly Guide
5	Plastic	Deep Blue	Puzzle Stand
6	Soft Plastic w/ Coating	Transparent w/ Multi-color of Black/ Grey/ Brown Coating	Body of Box
7	Soft Plastic w/ Coating	Transparent w/ Multi-color of Blue/ Green/ Purple Coating	Lid of Box

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ASTM F963-08 : Mechanical and physical

Testing period: 21 Apr. 2010 – 22 Apr. 2010

4. Safety requirements	
4.1	Material Quality (visual check) pass
4.12	Packaging film pass
5. Labeling requirements	
5.2	Age grading labeling pass
5.16	Promotional materials pass
6. Instructional literature	
6.1	Definition and description pass
7. Producer's markings	
7.1	Name and address of the producer or the distributor pass



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ASTM F963-08 : Flammability on solids and soft toys

Testing period: 21 Apr. 2010 – 22 Apr. 2010

4.2 Flammability on solids and soft toys	PASS
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The burning rate of the most severe part = 0.02 Inch/sec.

Note: Maximum permissible burning rate = 0.1 Inch/sec.



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ASTM F963-08 and CPSIA Sect 101: Total lead content in paint and coating materials

Testing period: 21 Apr. 2010 – 23 Apr. 2010

ASTM F963-08 Sect 4.3.5.1	Total lead content in paint and coating materials	PASS
CPSIA Sect 101	Total lead content in paint and coating materials	PASS

Test method: Sample was digested with acid and the toxic elements were analysed by Inductively coupled plasma - Optical emission spectrophotometer or Atomic Absorption Spectrophotometer. (QMA 36.035.05_HKG - Hot plate method, With ref. to EPA 3050B, Microwave assisted digestion method, CPSC-CH-E1001-08 microwave method, CPSC-CH-E1002-08 and CPSC-CH-E1003-09)

Test result:

Test No.	Material No.	Lead content (ppm)
		MDL: 10 ppm
1	2	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 ppm denotes parts per million

Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 101, is summarized below:

Effective Date	<u>Maximum Permissible Limit</u> Lead in paint and similar surface coating
1 year after enactment/ 14 Aug 2009	90 ppm

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CPSIA Sect 101: Total lead content in substrate materials

Testing period: 21 Apr. 2010 – 23 Apr. 2010

CPSIA Sect 101	Total lead content in substrate materials	PASS
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Test method: Sample was digested with acid and the toxic elements were analysed by Inductively coupled plasma - Optical emission spectrophotometer or Atomic Absorption Spectrophotometer. (QMA 36.035.05_HKG - Hot plate method, With ref. to EPA 3050B, Microwave assisted digestion method, CPSC-CH-E1001-08 microwave method, CPSC-CH-E1002-08 and CPSC-CH-E1003-09)

Test result:

Test No.	Material No.	Lead content (ppm)
		MDL: 10 ppm
1	3	n.d.
2	4+5	n.d.
3	6	n.d.
4	7	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 ppm denotes parts per million

Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 101, is summarized below:

Effective Date	Maximum Permissible Limit Lead in accessible substrate materials
180 days after enactment/10 Feb 2009	600 ppm
1 year after enactment/14 Aug 2009	300 ppm
3 years after enactment/14 Aug 2011	100 ppm

*2 According to Consumer Product Safety Commission, exemptions for lead as used in certain parts of children's electronic devices, for lead used :

- a) as an alloying element in steel, the maximum amount of lead shall be less than 0.35% by weight (3,500 ppm);
- b) in the manufacture of aluminum, the maximum amount of lead shall be less than 0.4% by weight (4,000 ppm);
- c) in copper-based alloys, the maximum amount of lead shall be less than 4% by weight (40,000 ppm).



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ASTM F963-08 : Soluble heavy metal

Testing period: 21 Apr. 2010 – 23 Apr. 2010

ASTM F963-08 Sect 4.3.5.2	Soluble heavy metals	PASS
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Test method: Determination of heavy metal on paint and similar surface coating material according to ASTM F963-08 (QMA 36.035.25 HKG)

This requirement applies to the coating which can be scraped off and the sample weight is greater than 10 mg

Test result:

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit							
		60	25	1000	75	60	90	60	500
		MDL							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
1	2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 mg/kg denotes milligram per kilogram

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CPSIA Sect 108: Phthalates

Testing period: 21 Apr. 2010 – 25 Apr. 2010

CPSIA Sect 108	Phthalates	PASS
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Test method: Organic solvent extraction, analyzed by GCMS (QMA 36.035.13 HKG)

Test result:

Parameter	CAS No.	Unit	Test No.	1	2
			Material No.	2	3
			MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	0.009	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass	Pass

Parameter	CAS No.	Unit	Test No.	3	4
			Material No.	4+5	6
			MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass	Pass

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Parameter	CAS No.	Unit	Test No.	5
			Material No.	7
Parameter	CAS No.	Unit	MDL	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass

n.d. = Not Detected (< MDL)

Abbreviation: MDL = Method Detection Limit

% denotes percentage

Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 108, is summarized below:

Date of Implementation	Parameter	Unit	Maximum Permissible Limit
180 days after the date of enactment/10 Feb 2009	Any children's toy or childcare article:		
	Dibutyl phthalate (DBP), Benzylbutyl phthalate (BBP) or Diethylhexyl phthalate (DEHP)	%	0.1
	Any children's toy that can be placed in a child's mouth or childcare article:		
	Di-n-octyl phthalate (DNOP), Diisodecyl phthalate (DIDP) or Diisononyl phthalate (DINP)	%	0.1

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#CPSIA Sect 103 : Tracking label

Testing period: 21 Apr. 2010 – 22 Apr. 2010

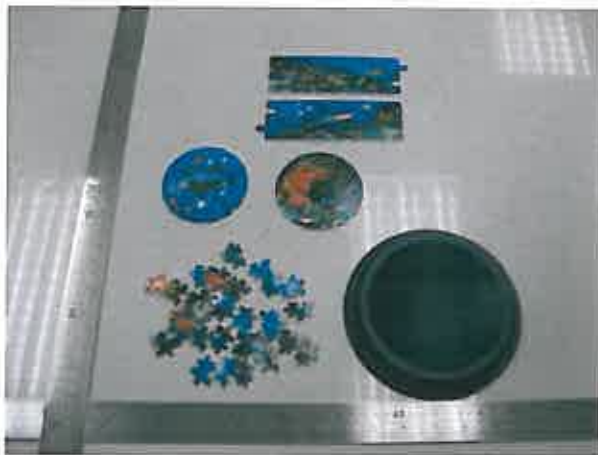
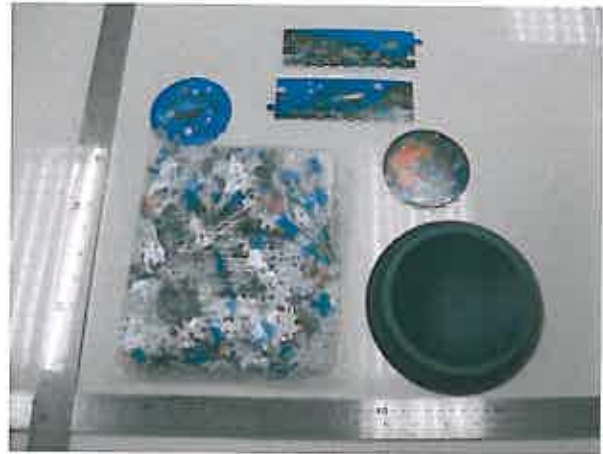
Tracking Label	PASS (*)
Advertisement claims on safety standards	PASS (*)

Remark: * Although no final packaging has been received, the manufacturer/trader/applicant has confirmed that the above information marked (*) will be shown onto the packaging or instruction sheet and the toy itself.

This test is not covered by DAP accreditation

Testing Laboratory accredited by DAP according to DIN EN ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.

Sample photos:



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