



DAP-PL-4094.00



Test Report No.: Q00032889a 005

Client: On File

Test item(s): Toys

Identification/ Model No(s): Dino Puzzles
Item No. : 26400-26434 , 26800-26805 , 26440-26446 , 27101-27108

Sample Receiving date: 02 Jun. 2010

Delivery condition: Apparent good, Samples tested as received

Test specification:

Please refer to "Test Result Summary List" on page 2 for details

Test result:

Please refer to page 2-18

Other information:

The labelled age grade of the item(s): Not provided
The appropriate age grade of the item(s): For age 3 years and up
The item(s) was/ were tested for the age of over 3 years.

By customer's request, the photo(s) of submitted sample is not attached in this report.

The report Q00032889a 005 supersede report Q00032889a 001

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

25 Jun. 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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Test Result Summary:

Test Specification	Result
ASTM F963-08: Mechanical and physical	PASS
ASTM F963-08: Flammability on solid and soft toys	PASS
ASTM F963-08 and CPSIA Sect 101: Total lead content in paint and coating materials	PASS
CPSIA Sect 101: Total lead content in accessible substrate materials	PASS
ASTM F963-08: Soluble heavy metal	PASS
CPSIA Sect 108: Phthalates	PASS
CPSIA Sect 103: Tracking label	PASS
EN 71 Part 1/ 10.05 + A9/ 08.09	PASS
EN 71 Part 2/ 01.06 + A1/ 03.07	PASS
EN 71 Part 3/ 12.94 + A1/09.00 + AC/07.02	PASS
BBP, DBP, DEHP content and DNOP, DINP, DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 & 52 respectively (formerly known as 2005/84/EC)	PASS
Total Cadmium Content in accordance to: REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)	PASS



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Material list

Item: Dino Puzzles

Item No. : 26400-26434 , 26800-26805 , 26440-26446 , 27101-27108

Material No.	Material	Color	Location
1	Whole Product	multicolor	Dino Puzzles
2	Plastic	White	Body of base, Raptor and plants
3	Coating	Orange/Light Orange/Black/White/Yellow/Multicolor	Surface of Raptor and tree trunk
4	Coating	Green	Surface of Tree leaf, Grass, land base
5	Coating	Grey/Mud Yellow/Black/ Multicolor	Surface of Brontosaurus



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ASTM F963-08 : Mechanical and physical

Testing period: 07 Jun. 2010 – 09 Jun. 2010

4. Safety requirements		
4.1	Material Quality (visual check)	PASS
4.6	Small objects	PASS(*)
4.7	Accessible edges	PASS
4.9	Accessible points	PASS
5. Labeling requirements		
5.2	Age grading labeling	PASS(*)
5.11	Small objects, small balls, marbles and balloons	PASS(*)
7. Producer's markings		
7.1	Name and address of the producer or the distributor	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 toy itself and/or packaging of the toy.



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ASTM F963-08 : Flammability on solids and soft toys

Testing period: 07 Jun. 2010 – 09 Jun. 2010

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

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

Abbreviation: IBE denotes Ignite But Self-extinguish



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

Testing period: 07 Jun. 2010 – 15 Jun. 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	3	n.d.
2	4	n.d.
3	5	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 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: 07 Jun. 2010 – 11 Jun. 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	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	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 Sect.4.3.5.2 : Soluble heavy metal

Testing period: 07 Jun. 2010 – 11 Jun. 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	100 0	75	60	90	60	500
MDL									
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
1(*1) (53mg)	3	n.d.	n.d.	2.5	n.d.	n.d.	n.d.	n.d.	n.d.
2(*1) (40mg)	4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3(*1) (59mg)	5	n.d.	n.d.	n.d.	n.d.	3.9	n.d.	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< MDL)

MDL = Method Detection Limit

mg/kg denotes milligram per kilogram

Remark: *1 The weight of test portion marked (*1) available was less than 100 mg, but greater than 10 mg, so results were calculated as if 100 mg of the sample were available.



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CPSIA Sect 108 : Phthalates

Testing period: 07 Jun. 2010 – 14 Jun. 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	3
			Material No.	2	3	4
			MDL	Result	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass	Pass	Pass

Parameter	CAS No.	Unit	Test No.	4
			Material No.	5
			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



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Abbreviation: n.d. = Not Detected (< MDL)
 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: 07 Jun. 2010 – 09 Jun. 2010

Tracking Label	PASS(*)
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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



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EN 71 Part 1: Mechanical and physical properties

Testing Period: 03 Jun. 2010 – 09 Jun. 2010

4	General requirements	
4.1	Material	PASS
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
7	Warnings and instructions for use	
7.1	General	PASS(*)
7.2	Toys not intended for children under 36 months	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.



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EN 71 Part 2: Flammability

Testing Period: 07 Jun. 2010 – 09 Jun. 2010

4.1 General	PASS
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EN 71 Part 3: Migration of certain elements**Analysis results:**

Test Method: Test portion was extracted with acid according to EN71 Part 3: 12.94 + A1/09.00 + AC/07.02 (QMA 36.035.07 HKG)

Testing Period: 07 Jun. 2010 – 11 Jun. 2010

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit of Other Toy Materials except Modelling Clay							
		60	25	1000	75	60	90	60	500
		Maximum Permissible Limit of Modelling Clay							
		60	25	250	50	25	90	25	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.
2(*1)(53mg)	3	n.d.	n.d.	2.5	n.d.	n.d.	n.d.	n.d.	n.d.
3(*1)(40mg)	4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
4(*1)(59mg)	5	n.d.	n.d.	n.d.	n.d.	3.9	n.d.	n.d.	n.d.

Remark:

*1. The weight of test portion marked (*1) available was less than 100 mg, but greater than 10 mg, so results were calculated as if 100 mg of the sample were available.

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



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BBP, DBP, DEHP content and DNOP, DINP, DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 & 52 respectively (formerly known as 2005/84/EC)

Test result

Test method: Organic solvent extraction, analyzed by GCMS (QMA 36.035.13 HKG)

Testing period: 07 Jun. 2010 – 14 Jun. 2010

Parameter	CAS No.	Unit	MDL	Test No.	2
				1	3
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.
Sum (DBP+BBP+DEHP)		%	0.005	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Sum (DNOP+DIDP+DINP)		%	0.005	n.d.	n.d.

Parameter	CAS No.	Unit	MDL	Test No.	4
				3	5
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.
Sum (DBP+BBP+DEHP)		%	0.005	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Sum (DNOP+DIDP+DINP)		%	0.005	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 % denotes percentage



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Remark:

- *1. Single components with an amount of <0.005% were not considered by the calculation of the sum.
In the case of all 6 Phthalates were not detected, the result is stated n.d.
- *2. Requirements according to BBP, DBP and DEHP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 (formerly known as 2005/84/EC) and DNOP, DINP and DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 52 (formerly known as 2005/84/EC) are summarized as below.

A. For toys and childcare articles:

Parameter	Unit	Maximum Allowable Limit
Dibutyl phthalate (DBP)	%	--
Butyl benzyl phthalate (BBP)	%	--
Di-2-ethylhexyl phthalate (DEHP)	%	--
Sum	%	0.1

B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children:

Parameter	Unit	Maximum Allowable Limit
Di-n-octyl phthalate (DNOP)	%	--
Di-iso-decyl phthalate (DIDP)	%	--
Di-iso-nonyl phthalate (DINP)	%	--
Sum	%	0.1



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Total Cadmium Content in accordance to REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)
Test result

Test method: For plastic: EN1122: 2001 method B (QMA 36.035.24 HKG)

For metal: sample digested with acid and determined by ICP – OES
(QMA 36.035.04 HKG)For other material: sample is digested with reference to EN 1122: 2001 method B
(QMA 36.035.04 HKG)

Testing Period: 07 Jun. 2010 – 11 Jun. 2010

Test No.	Material No.	Cadmium Content (mg/kg)		
		Trial 1	Trial 2	Average
		MDL: 10 mg/kg		
1	2	n.d.	-	-
2	3	n.d.	-	-
3	4	n.d.	-	-
4	5	n.d.	-	-

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



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Remark:

*1. Regulations on Cadmium

Country	Legislation	Maximum Permissible Limit		
		Paint, plastic, metal plating & other coloured materials	Metal Alloy	Gypsum
Netherlands	Netherlands Cadmium Decree 1999, No.: 149 and amendment in Sept.2000 No.186 (Chemical Substances Act)	100mg/kg	Not Specified	2mg/kg

Country	Legislation	Maximum Permissible Limit	
		Paint, plastic, plating/coating of surface treatment	Paint (high zinc content)
EC	REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)	100mg/kg	<1000mg/kg
United Kingdom	Statutory Instrument 1993 No. 1643 The Environmental Protection (Controls on Injurious Substances) (No. 2) Regulations	100mg/kg	1000mg/kg
Germany	Germany Chemikalien-Verbotsverordnung – ChemVerbotsV, Anhang Abschnitt 18, Okt 1993	100mg/kg	-
Switzerland	Switzerland Chemikalien-Risikoreduktions-Verordnung- ChemRRV, 814.81, 18 May 2005	<100mg/kg	-

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

END

