



Test Report

Date : 2019-06-20
No. : SP19040363

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Applicant : Hayes Specialties Corporation
1761 East Genesee Saginaw, MI 48601-2407

Date Samples Received : 2019-04-29, 2019-05-15, 2019-06-18

Date Tested : 2019-04-29 to 2019-06-20

Requirements	Conclusion
1. ASTM Standard Consumer Safety Specification For Toy Safety F 963-17 - physical and mechanical test - flammability test - heavy metal test	Pass
2. US Consumer Product Safety Improvement Act - Total Lead content in paint and surface coating in accordance with Sec. 101 (f) and 16 CFR 1303. - Total Lead content in substrate in accordance with Sec. 101(a). - Phthalates content in accordance with Sec 108 and 16 CFR 1307.	Pass
3. The Total Lead content requirements according to the California Proposition 65	Pass
4. The BBP, DBP, DEHP, DnHP, DINP and DIDP content requirements according to the California Proposition 65.	Pass
5. Total cadmium content requirements according to the California Proposition 65.	Pass
6. The Total Lead content requirements according to Illinois Public Act 095-1019	Pass
7. The Phthalates content requirements according to California Assembly Bill NO.1108	Pass
8. San Francisco Health Code - Phthalates content in accordance with Article 34, sec 34.2	Pass

HUANG Qinglai, Owen
Authorized Signatory



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Description of Samples : One (1) group of submitted samples said to be:
COUNTRY OF ORIGIN: CHINA
AGE GRADING FOR APPLICANT: 3+
AGE GRADING FOR TESTING: 3+

Style No.	Description
17714	Flashing Unicorn Ring-2 Inch-2dozen Display Box
17715	Flashing Christmas Tree Ring-2inch-2dozen Display Box
17717	Flashing Llama Ball-55mm-Asstcolors
17716	Flashing Unicorn Ball-55mm-Asstcolors
17718	Glow In The Dark Solar System Bedroom Sticker Set -Carded
17720	Dinosaur Fossil Building Set-15 Pieces Per Boxed Set-4assorted

The following test item(s) was/were performed on submitted sample(s) and/or components confirmed by applicant.

Item No.	Component Description
Coating materials:	
<u>1</u>	(RUBBER BALL)Coating on rubber ball: multicolor
<u>2</u>	Coating on rubber ring: pink*5
<u>3</u>	Coating on rubber ring: black
<u>4</u>	Coating on rubber ring: blue*5
<u>5</u>	Coating on rubber ring: purple*4
<u>6</u>	Coating on rubber ring: yellow*4
<u>7</u>	Coating on rubber ring: white*4
Plastic materials:	
<u>8</u>	(SOLAR SYSTEM)Plastic part: grey white
<u>9</u>	(DINOSAUR)Plastic part: nude yellow
<u>10</u>	(ARMED FORCES)Plastic part: green
<u>11</u>	(ARMED FORCES)(ANTI-TERRORISM)(MILITARY AIRCRAFT)Plastic part: black
<u>12</u>	(ARMED FORCES)(ANTI-TERRORISM)(MILITARY AIRCRAFT)Plastic part: transparent
<u>13</u>	(ARMED FORCES)(ANTI-TERRORISM)Plastic part: milk white
<u>14</u>	(ANTI-TERRORISM)(MILITARY AIRCRAFT)Plastic part: grey
<u>15</u>	(ANTI-TERRORISM)Plastic part: blue*6
<u>16</u>	(ANTI-TERRORISM)Plastic part: red*6
<u>17</u>	(MILITARY AIRCRAFT)Plastic part: transparent red
<u>18</u>	(MILITARY AIRCRAFT)Plastic part: nude yellow
Rubber materials:	
<u>19</u>	(RUBBER BALL)Rubber ball(substrate): blue
<u>20</u>	(RUBBER BALL)Rubber ball(substrate): purple
<u>21</u>	(RUBBER BALL)Rubber ball(substrate): yellow
<u>22</u>	(RUBBER BALL)Rubber ball(substrate): orange red
<u>23</u>	(RUBBER BALL)Rubber ball(substrate): rose pink
<u>24</u>	(RUBBER BALL)Rubber ball(substrate): green
<u>25</u>	Rubber ring(substrate): white
<u>26</u>	Rubber ring(substrate): green
Paper materials:	

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<u>27</u>	(DINOSAUR)(ARMED FORCES)(ANTI-TERRORISM)(MILITARY AIRCRAFT)Instruction: white with multicolour print
<u>Others materials:</u>	
<u>28</u>	(SOLAR SYSTEM)EVA: grey with glue

Test Results:

1.ASTM Standard Consumer Safety Specification for Toy Safety F 963-17

AGE GRADING:

The sample was age graded with the marking of “ ages 3+,6+ ”; however, the applicant requested it be tested according to the age grade of 36 months and up.

AGE GRADING FOR TESTING:

36 months and up.

1.1 Mechanical and physical hazards of the submitted sample

Ref.: ASTM F 963-17

Applicable requirements before and after use and abuse testing:

<u>Applicable Section</u>	<u>Description</u>	<u>Result</u>
4	<u>Safety requirements</u>	----
4.1	Material Quality	Pass
4.2	Flammability	Pass* ¹
4.6	Small objects	Pass
4.7	Accessible Edges	Pass
4.9	Accessible Points	Pass
5	<u>Labeling Requirements</u>	----
5.1	Federal Government Requirements	Pass
5.2	Age grading labeling	* ²
5.3	Safety Labeling Requirements	Pass
5.11	Small objects, Small Balls, Marbles and Balloons	Pass
6	<u>Instructional Literature</u>	----
6.1	Definition and Description	Pass
7	<u>Producer’s Markings</u>	----
7.1	Producer’s Name and Address	Pass

*¹ = Please refer to section 1.2 of this report for details.

*² = See age grading.

Use and abuse testing:

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Test Results:

<u>Applicable Section</u>	<u>Description</u>	<u>Test Condition</u>
8.5	Normal Use Testing	
8.6	Abuse Testing	
8.7	Drop Tests	4 drops at 3 ft
8.8	Torque Tests	4 in-lbs or ±180°
8.9	Tension Tests	15 lbs.
8.10	Compression Tests	30 lbs.

1.2 Flammability test for solids and soft toys

Ref.: ASTM F963-17 Section 4.2
Method used: FHSA 16CFR 1500.44
Result: pass

<u>Sample</u>	<u>Burn rate (in/sec.)</u>
Flashing Unicorn Ring-2 Inch-2dozen Display Box	DNI
Flashing Christmas Tree Ring-2inch-2dozen Display Box	DNI
Flashing Llama Ball-55mm-Asstcolors	DNI
Flashing Unicorn Ball-55mm-Asstcolors	DNI
Glow In The Dark Solar System Bedroom Sticker Set -Carded	DNI
Dinosaur Fossil Building Set-15 Pieces Per Boxed Set-4assorted	DNI

DNI = Did not ignite

Note: In accordance with the FHSA, the burn rate should not be greater than 0.1 in. per second.

1.3 Heavy metal test

Ref.: ASTM F963-17 Section 4.3.5
Method: ASTM F963-17 Section 8.3
Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer & Inductively Coupled Plasma Mass Spectrometry

4.3.5.1 Paint and similar surface-coating

Total lead analysis

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
1	<10ppm	90ppm
2	<10ppm	90ppm
3	<10ppm	90ppm
4+5	<10ppm	90ppm
6	<10ppm	90ppm
7	<10ppm	90ppm

Soluble metals test

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Test Results:

*4 = The surface coating is less than 10mg, so it is not necessary to conduct the test according to the standard.

*5 = There were insufficient materials to produce the test portion of 100 mg in one sample. According to the Standard, the quantities of the elements were calculated as if 100 mg of test portion had been used. The actual weight of the specified materials used for analysis were shown below :

- 2 Coating on rubber ring: pink(10.0mg)
- 4 Coating on rubber ring: blue(66.4mg)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	15ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm

4.3.5.2 Toys Substrate Materials

Total lead analysis

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
8+9+10	<10ppm	100ppm
<u>11+12+13</u>	<10ppm	100ppm
<u>14</u>	<10ppm	100ppm
<u>15+16</u>	<10ppm	100ppm
<u>17+18</u>	<10ppm	100ppm
<u>19+20+21</u>	<10ppm	100ppm
<u>22+23+24</u>	<10ppm	100ppm
<u>25+26</u>	<10ppm	100ppm
<u>27</u>	<10ppm	100ppm
<u>28</u>	<10ppm	100ppm

Soluble metals test

*6 = There were insufficient materials to produce the test portion of 100 mg in one sample. According to the Standard, the quantities of the elements were calculated as if 100 mg of test portion had been used. The actual weight of the specified materials used for analysis were shown below :

- 15 (ANTI-TERRORISM)Plastic part: blue(71.4mg)
- 16 (ANTI-TERRORISM)Plastic part: red(38.6mg)

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Test Results:

	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm
	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm
	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm
	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	<5ppm	500ppm

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	<u>28</u>	<u>Limit</u>
Soluble lead.....	<5ppm	90ppm
Soluble cadmium.....	<5ppm	75ppm
Soluble chromium.....	<5ppm	60ppm
Soluble barium.....	<5ppm	1000ppm
Soluble antimony.....	<5ppm	60ppm
Soluble arsenic.....	<2ppm	25ppm
Soluble mercury.....	<5ppm	60ppm
Soluble selenium.....	<5ppm	500ppm

Note: < denotes less than.

2. US Consumer Product Safety Improvement Act

2.1 Children's products containing lead - Total Lead content in paint and surface coating

Ref.: CPSIA Sec 101(f) and 16 CFR 1303

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
1	<10ppm	90ppm
2	<10ppm	90ppm
3	<10ppm	90ppm
4+5	<10ppm	90ppm
6	<10ppm	90ppm
7	<10ppm	90ppm

Note: < denotes less than.

2.2 Children's products containing lead - Total Lead content in substrate

Ref.: CPSIA Sec 101(a)

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
8+9+10	<10ppm	100ppm
11+12+13	<10ppm	100ppm
14	<10ppm	100ppm
15+16	<10ppm	100ppm
17+18	<10ppm	100ppm
19+20+21	<10ppm	100ppm
22+23+24	<10ppm	100ppm
25+26	<10ppm	100ppm
27	<10ppm	100ppm
28	<10ppm	100ppm

Note: < denotes less than.

2.3 Phthalates content

Ref.: CPSIA Sec 108 and 16 CFR PART 1307

Determined by: Gas Chromatography with Mass Selective Detector

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Test Results:

Test Item	CAS No.	Result(ppm)			Limit (ppm)
		1	2	3	
Di-n-butyl phthalate (DBP)	84-74-2	<100	<100	<100	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	<100	<100	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	1000
Di-n-pentyl phthalate(DPENP)	131-18-0	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit (ppm)
		4+5	6	7	
Di-n-butyl phthalate (DBP)	84-74-2	<100	<100	<100	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	<100	<100	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	1000
Di-n-pentyl phthalate(DPENP)	131-18-0	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit (ppm)
		8+9+ 10	11+12 +13	14+15 +16	
Di-n-butyl phthalate (DBP)	84-74-2	<100	174	168	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	<100	<100	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	1000
Di-n-pentyl phthalate(DPENP)	131-18-0	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit (ppm)
		17+18	19+20 +21	22+23 +24	
Di-n-butyl phthalate (DBP)	84-74-2	<100	<100	<100	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	<100	<100	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	1000
Di-n-pentyl phthalate(DPENP)	131-18-0	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	1000

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Test Results:

Test Item	CAS No.	Result(ppm)			Limit (ppm)
		25+26	27	28	
Di-n-butyl phthalate (DBP)	84-74-2	<100	<100	<100	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	<100	<100	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	1000
Di-n-pentyl phthalate(DPENP)	131-18-0	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	1000

Note: < denotes less than.

3. The Total Lead Content

Ref.: California Proposition 65

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

Sample	Result	Limit
<u>1</u>	<10ppm	90ppm
<u>2</u>	<10ppm	90ppm
<u>3</u>	<10ppm	90ppm
<u>4+5</u>	<10ppm	90ppm
<u>6</u>	<10ppm	90ppm
<u>7</u>	<10ppm	90ppm
<u>8+9+10</u>	<10ppm	100ppm
<u>11+12+13</u>	<10ppm	100ppm
<u>14</u>	<10ppm	100ppm
<u>15+16</u>	<10ppm	100ppm
<u>17+18</u>	<10ppm	100ppm
<u>19+20+21</u>	<10ppm	100ppm
<u>22+23+24</u>	<10ppm	100ppm
<u>25+26</u>	<10ppm	100ppm
<u>27</u>	<10ppm	100ppm
<u>28</u>	<10ppm	100ppm

Note: < denotes less than.

4. The BBP, DBP, DEHP, DnHP, DINP and DIDP content

Ref.: California Proposition 65

Determined by: Gas Chromatography with Mass Selective Detector

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4+5</u>
- Di-n-butyl phthalate (DBP)	<100ppm	<100ppm	<100ppm	<100ppm
- Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	<100ppm
- Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
- Di-n-Hexyl phthalate (DnHP)	<100ppm	<100ppm	<100ppm	<100ppm
- Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
- Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm

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Test Results:

-	Di-n-butyl phthalate (DBP)	<u>6</u>	<u>7</u>	<u>8+9+10</u>	<u>11+12+13</u>
-	Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	174ppm
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-Hexyl phthalate (DnHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-butyl phthalate (DBP)	<u>14+15+16</u>	<u>17+18</u>	<u>19+20+21</u>	<u>22+23+24</u>
-	Benzyl-n-butyl phthalate (BBP)	168ppm	<100ppm	<100ppm	<100ppm
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-Hexyl phthalate (DnHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-butyl phthalate (DBP)	<u>25+26</u>	<u>27</u>	<u>28</u>	
-	Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	
-	Di-n-Hexyl phthalate (DnHP)	<100ppm	<100ppm	<100ppm	
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	

Requirement: Each of the above phthalates shall not be greater than 1000ppm by mass of the tested material.

Note: < denotes less than.

5. The Total cadmium content

Ref.: California Proposition 65

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
1	<5ppm	75ppm
2	<5ppm	75ppm
3	<5ppm	75ppm
4+5	<5ppm	75ppm
6	<5ppm	75ppm
7	<5ppm	75ppm
8+9+10	<5ppm	75ppm
<u>11+12+13</u>	<5ppm	75ppm
14	<5ppm	75ppm
15+16	<5ppm	75ppm
17+18	<5ppm	75ppm
19+20+21	<5ppm	75ppm
<u>22+23+24</u>	<5ppm	75ppm
<u>25+26</u>	<5ppm	75ppm
27	<5ppm	75ppm
<u>28</u>	<5ppm	75ppm

Note: < denotes less than.

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Test Results:

6. The Total Lead Content requirements according to Illinois Public Act 095-1019

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
1	<10ppm	40ppm
2	<10ppm	40ppm
3	<10ppm	40ppm
4+5	<10ppm	40ppm
6	<10ppm	40ppm
7	<10ppm	40ppm
8+9+10	<10ppm	40ppm
11+12+13	<10ppm	40ppm
14	<10ppm	40ppm
15+16	<10ppm	40ppm
17+18	<10ppm	40ppm
19+20+21	<10ppm	40ppm
22+23+24	<10ppm	40ppm
25+26	<10ppm	40ppm
27	<10ppm	40ppm
28	<10ppm	40ppm

Note: < denotes less than.

7. Phthalates content

Ref.: California Assembly Bill NO.1108

Determined by: Gas Chromatography with Mass Selective Detector

A. Any toy or children article

<u>Test Item</u>	<u>CAS No.</u>	<u>Result(ppm)</u>			<u>Limit(ppm)</u>
		<u>1</u>	<u>2</u>	<u>3</u>	
Dibutyl phthalate(DBP)	84-74-2	<100	<100	<100	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	<100	<100	<100	1000

<u>Test Item</u>	<u>CAS No.</u>	<u>Result(ppm)</u>			<u>Limit(ppm)</u>
		<u>4+5</u>	<u>6</u>	<u>7</u>	
Dibutyl phthalate(DBP)	84-74-2	<100	<100	<100	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	<100	<100	<100	1000

<u>Test Item</u>	<u>CAS No.</u>	<u>Result(ppm)</u>			<u>Limit(ppm)</u>
		<u>8+9+10</u>	<u>11+12+13</u>	<u>14+15+16</u>	
Dibutyl phthalate(DBP)	84-74-2	<100	174	168	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	<100	<100	<100	1000

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Test Results:

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		17+18	19+20+21	22+23+24	
Dibutyl phthalate(DBP)	84-74-2	<100	<100	<100	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		25+26	27	28	
Dibutyl phthalate(DBP)	84-74-2	<100	<100	<100	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	<100	<100	<100	1000

B. Any toys and children articles which can be placed in mouth for children under 3 years

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		1	2	3	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		4+5	6	7	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		8+9+10	11+12+13	14+15+16	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		17+18	19+20+21	22+23+24	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	1000

Test Item	CAS No.	Result(ppm)			Limit(ppm)
		25+26	27	28	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	1000

Note: < denotes less than.

8. Phthalates content

Ref.: San Francisco Health Code Article 34, sec 34.2

Determined by: Gas Chromatography with Mass Selective Detector

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Test Results:

-	Di-n-butyl phthalate (DBP)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4+5</u>
-	Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-octyl phthalate(DNOP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-butyl phthalate (DBP)	<u>6</u>	<u>7</u>	<u>8+9+10</u>	<u>11+12+13</u>
-	Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	174ppm
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-octyl phthalate(DNOP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-butyl phthalate (DBP)	<u>14+15+16</u>	<u>17+18</u>	<u>19+20+21</u>	<u>22+23+24</u>
-	Benzyl-n-butyl phthalate (BBP)	168ppm	<100ppm	<100ppm	<100ppm
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-octyl phthalate(DNOP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm
-	Di-n-butyl phthalate (DBP)	<u>25+26</u>	<u>27</u>	<u>28</u>	
-	Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	
-	Di (2-ethylhexyl) phthalate (DEHP)	<100ppm	<100ppm	<100ppm	
-	Di-n-octyl phthalate(DNOP)	<100ppm	<100ppm	<100ppm	
-	Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	
-	Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	

Requirement: Each of the above phthalates shall not be greater than 1000ppm by mass of the tested material.

Note: < denotes less than.

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The photo of submitted samples



***** End of Test Report *****

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