

**Eurofins Product Testing A/S**  
**Smedeskovvej 38**  
**DK-8464 Galten**

**Phone +45 70 22 42 76**  
**Fax +45 70 22 42 75**  
**Product-testing@eurofins.dk**  
**www.eurofins.dk**

**Plus Plus A/S**  
**Diana Huniche**  
**Borupvej 20**  
**4300 Holbæk**

**Date**  
**20 March 2013**  
**Our ref.**  
**G11813 – 16 – rev. 1**  
**LVE**

## Test Report - Toy

### Sample material

Product type	Midi Basic (20 pieces)
Sample identification	3202
Date received	November 9, 2011
Analytical period	November 9 – December 12, 2011


### Photo

Building system in different colours.	
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### Results

Standards	Results
EN 71-1: 2011	Complies subject to labelling changes
EN 71-2: 2011	Complies
EN 71-3: 1994/AC: 2002	Complies
Lead content in accordance with the Danish executive order no. 856/2009	Complies
Cadmium content in accordance with REACH entry 23 of regulation (EC) no. 1907/2006, App. XVII (consolidated version, 2011)	Complies
Phthalates in accordance with REACH entry 51 & 52 of regulation (EC) no. 1907/2006, App. XVII (consolidated version, 2011)	Complies

**Eurofins Product Testing A/S**



**Liv Vestergaard**  
**MSc**

# Results

## EN 71-1: 2011 – Safety of Toys Mechanical & Physical Properties

Clause no.	Title	Result
<b>4.0</b>	<b>General Requirements</b>	
4.1	Material	Satisfactory
4.2	Assembly	Not applicable
4.3	Flexible plastic sheeting	Not applicable
4.4	Toy bags	Not applicable
4.5	Glass	Not applicable
4.6	Expanding materials	Not applicable
4.7	Edges	Satisfactory
4.8	Points and wires	Satisfactory
4.9	Protruding parts	Not applicable
4.10.1	Folding and sliding mechanisms	Not applicable
4.10.2	Driving mechanisms	Not applicable
4.10.3	Hinges	Not applicable
4.10.4	Springs	Not applicable
4.11	Mouth actuated toys	Not applicable
4.12	Balloons	Not applicable
4.13	Cords of toy kites and other flying toys	Not applicable
4.14.1	Toys which a child can enter	Not applicable
4.14.2	Masks and helmets	Not applicable
4.15.1	Toys propelled by the child or by other means	Not applicable
4.15.2	Free wheeling toy bicycles	Not applicable
4.15.3	Swings and similar toys	Not applicable
4.15.4	Rocking horses and similar toys	Not applicable
4.15.5	Toys not propelled by a child	Not applicable
4.16	Heavy immobile toys	Not applicable
4.17.1	Projectiles – general	Not applicable
4.17.2	Projectiles toys without stored energy	Not applicable
4.17.3	Projectiles toys with store energy	Not applicable
4.17.4	Bows and arrows	Not applicable
4.18	Aquatic toys	Not applicable
4.19	Percussion caps specifically designed for use in toys	Not applicable
4.20	Acoustics	Not applicable
4.21	Toys containing a heat source	Not applicable
4.22	Small balls	Not applicable
4.23.1	Magnets general	Not applicable
4.23.2	Toys other than magnetic/electrical experimental sets intended for children over 8 years	Not applicable
4.23.3	Magnetic/electrical experimental sets intended for children over 8 years	Not applicable
4.24	Yo-yo balls	Not applicable
4.25	Toys attached to food	Not applicable
<b>5</b>	<b>Toys intended for children under 36 months</b>	
5.1	General requirements	See 7.2
5.2	Filling materials	Not applicable
5.3	Adhesion of plastic sheeting	Not applicable
5.4	Cords on toys	Not applicable
5.5	Liquid filled toys	Not applicable
5.6	Swings	Not applicable
5.7	Speed limitation of electrically driven toys	Not applicable
5.8	Glass and porcelain	Not applicable
5.9	Shape and size of certain toys	Not applicable
5.10	Toys containing monofilament fibres	Not applicable
5.11	Play figures	Not applicable
5.12	Hemispheric-shaped toys	Not applicable
5.13	Suction cups	Not applicable

The test results relate only to the items tested.

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## Results

Clause no.	Title	Result
5.14	Straps intended to be worn fully or partially around the neck	Not applicable
<b>6</b>	<b>Packaging</b>	Not applicable
<b>7</b>	<b>Warnings and instructions for use</b>	
	<b>Markings and information required by Directive 2009/48/EC</b>	<b>Satisfactory</b>
7.1	General: see note below	<b>Unsatisfactory</b>
7.2	Toys not intended for children under 36 months:	Not applicable

### Note:

The label stated the following warning, "Not recommended for children under 3 years. Contains small pieces that could be swallowed".

EN71-1:2011 clause 7.1 states that 'Warnings on toys shall not be misleading or incorrect'. As the toy does not contain small parts the warning is misleading and incorrect and should be removed.

As the toy is intended for children over the age of 3 years, but it is not unsafe for children under this age the manufacturer may replace the warning with a positive age recommendation.

### EN71-2: 2011 – Safety of Toys Flammability

<b>4.1</b>	<b>General</b>	
	Cellulose Nitrate	Complies
	Pile Surface flash test	Not applicable
	Other requirements	Complies

<b>4.2</b>	<b>Toys to be worn on the head which includes beards, moustaches, wigs etc. made from hair, pile or other material with similar feature, moulded and fabric masks and flowing material attached to hats, masks etc.</b>	
4.2.2	Beads, moustaches, wigs etc., made from hair, pile or material with similar features, which protrude $\geq 50$ mm from the surface of the toy	Not applicable
4.2.3	Beads, moustaches, wigs etc., made from hair, pile or material with similar features, which protrude $< 50$ mm from the surface of the toy	Not applicable
4.2.4	Full or partial moulded head masks including those which cover the head	Not applicable
4.2.5	Flowing shrouds, hoods, head-dresses, etc. which are attached to products worn on the head and fabric masks which partially or fully cover the head, but excluding items covered by 4.3	Not applicable

<b>4.3</b>	<b>Toy disguise costumes and toys intended to be worn by a child in play</b>	
Description	Rate of spread of flame/ (mm per sec)	
		Not applicable
Labelling on toy		Not applicable
Labelling on packaging		Not applicable

<b>4.4</b>	<b>Toys intended to be entered by a child</b>	
Description	Rate of spread of flame/ (mm per sec)	
		Not applicable
Flaming debris/molten drips observed		Not applicable
Labelling on toy		Not applicable
Labelling on packaging		Not applicable

<b>4.5</b>	<b>Soft filled toys with a piled or textile surface</b>	
Description	Greatest dimension of toy (mm)	Rate and spread of flame (mm per sec)
		Not applicable

The test results relate only to the items tested.

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## Results

### Modification of EN71-3: 1994/AC:2002 – Safety of toys, Specification for migration of certain elements

Limits of element migration from accessible parts of toy material

All values are given as mg per kg material (ppm). Uncertainty, Um: 30% (Um (%): The expanded uncertainty Um is equal to 2 x RSD%).

The test is expanded to include 17 elements instead of the 8 elements from EN 71-3.

Element	Al	Sb	As	Ba	Pb	B	Cd	Cr
Limits for elements	70000	560	47	56000	160	15000	23	0.2
Description of sample	Results of analysis (mg/kg)							
A MB PE 70 white-1 (1)	< 20	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	0.042
B MB PE yellow 28301 (2)	< 20	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	< 0.005
C MB PE Orange 28305 (3)	< 20	< 0.2	< 0.05	< 1	< 0.5	< 10	< 0.02	0.090
D MB PE red 28244 (4)	< 20	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	< 0.005
E MB PE green 28250 (5)	< 20	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	< 0.005
F MB PE blue 28302 (6)	110	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	0.019
G PE (polyethylene) polymer	< 20	< 0.2	< 0.05	< 1	< 0.2	< 10	< 0.02	< 0.005

Element	Co	Cu	Hg	Mn	Ni	Se	Sr	Sn	Zn
Limits for elements	130	7700	94	15000	930	460	56000	12	46000
Description of sample	Results of analysis (mg/kg)								
A MB PE 70 white-1 (1)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	< 2	< 0.005	< 5
B MB PE yellow 28301 (2)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	< 2	< 0.005	< 5
C MB PE Orange 28305 (3)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	3.1	< 0.005	< 5
D MB PE red 28244 (4)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	16	< 0.005	< 5
E MB PE green 28250 (5)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	< 2	< 0.005	< 5
F MB PE blue 28302 (6)	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	< 2	0.008	< 5
G PE (polyethylene) polymer	< 0.05	< 1	< 0.05	< 10	< 0.5	< 0.005	< 2	< 0.005	< 5

#### Comment:

The master batch constitutes only 2% of the completed product.

#### Abbreviations:

Al Aluminium  
Hg Mercury  
Mn Manganese  
Ni Nickel  
Sr Strontium  
Sn Tin

Cu Copper  
Sb Antimony  
Se Selenium  
As Arsenic  
Ba Barium  
Pb Lead

Cr Chromium  
B Boron  
Cd Cadmium  
Co Cobalt  
Zn Zinc

## Results

Content of cadmium according to REACH Regulation (EC) 1907/2006, App XVII, entry 23

Method: EPA 3052mod.

Princip: ICP/MS

All values are given as mg per kg material (ppm).

Uncertainty,  $U_m$ : 30% ( $U_m$  (%): The expanded uncertainty  $U_m$  is equal to  $2 \times RSD\%$ ).

Content of cadmium:

Element	Cadmium
Limits for element	100
	Results of analysis (mg/kg)
MB PE 70 white-1 (1)	< 0.1
MB PE yellow 28301 (2)	< 0.1
MB PE Orange 28305 (3)	0.2
MB PE red 28244 (4)	< 0.1
MB PE green 28250 (5)	0.1
MB PE blue 28302 (6)	0.2

### Comment:

The master batch constitutes only 2% of the completed product.

Content of lead in accordance with the Danish executive order no. 856/2009

Method: EPA 3052mod.

Princip: ICP/MS

All values are given as mg per kg material (ppm).

Uncertainty,  $U_m$ : 30% ( $U_m$  (%): The expanded uncertainty  $U_m$  is equal to  $2 \times RSD\%$ ).

Content of Lead:

Element	Lead
Limits for element	100
	Results of analysis (mg/kg)
MB PE 70 white-1 (1)	15
MB PE yellow 28301 (2)	2
MB PE Orange 28305 (3)	270
MB PE red 28244 (4)	2
MB PE green 28250 (5)	1
MB PE blue 28302 (6)	4

### Comment:

The master batch constitutes only 2% of the completed product.

## Results

Concentration of phthalates in accordance with entry 51 & 52 of regulation (EC) no. 1907/2006, App. XVII

Method: internal

Princip: GC/MS

All values are given as mg per kg material (ppm).

Uncertainty, Um: 30% (Um (%): The expanded uncertainty Um is equal to 2 x RSD%).

Test item	PE (polyethylene) polymer	Limit
Dibutyl Phthalat (DBP)	< 10	100
Benzylbutyl Phthalat (BBP)	< 10	100
Bis-(2-ethylhexyl) Phthalate (DEHP)	< 10	100
Diisononyl Phthalate (DINP)	< 50	100
Di-n-octyl Phthalate (DNOP)	<10	100
Diisodecyl Phthalate (DIDP)	< 50	100

### Comments:

This report is a compilation of data from G11806.