Test Report

APPLICANT : **TRUDI S.p.A.**

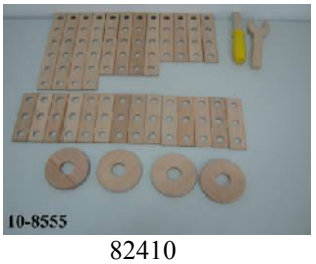
Via A. Angeli, 150
33017 Tarcento (Udine) - Italia

CONTACT PERSON : Ms. Carol Hoefken

SAMPLE DESCRIPTION : SMALL CONSTRUCTION KITS 53 PCS, BIG CONSTRUCTION KITS 88 PCS
ITEM NO.: 82409, 82410
SUPPLIER: SKY-BLUE GIFT & TOYS CO., LTD
DIMENSIONS: X=149mm; Y=51mm; Z=15mm

82409

82409



82410

82410

DATE OF SUBMISSION : 2010-10-27

TESTING PERIOD : 2010-10-28 To 2010-11-09

LABELED AGE GRADING : 36months+

AGE GRADING FOR TESTING : As declared by the client

Rapporto revisionato ed approvato da
Report revised and approved by

Dott. Ing. Natale Consonni
Direttore Tecnico - Technical Director
Istituto Italiano Sicurezza dei Giocattoli
Circ. Min. 5942/07

Dr. Ing. Alain Curti
Director

Test Report

SUMMARY OF TEST RESULTS			
Test requested	**Pass**	**Fail**	**Remark**
EN 71-1:2005+A9:2009 "Safety of toys – Part 1: Mechanical and physical properties"	**X**		
EN 71-2:2006+A1:2007 "Safety of toys – Part 2: Flammability"	**X**		
EN71-3:1994/ A1:2000/ AC:2000/ AC:2002 "Safety of toys – Part 3: Migration of certain elements"	**X**		
Lead and Cadmium and its compounds in accordance with points 16, 17 and 23 of the Annex XVII of the Regulation (EC) no. 1907/2006 (REACH) and further amendments	**X**		
Azodyes in accordance with point 43 of the Annex XVII of the Regulation (EC) no. 1907/2006 (REACH) and further amendments	**X**		
EN 71-9 "Safety of Toys – Part: 9 Organic chemical compounds – requirements requested for the following Specific Toy / Toy Component - Determination of Formaldehyde release on wood components	**X**		
Determination of pentachlorophenol in accordance with point 22 of the Annex XVII of the Regulation (EC) no. 1907/2006 (REACH) and further amendments	**X**		

EXPLANATION OF THE ABBREVIATIONS FOR EN71 PART 1 AND 2

SYMBOL	EXPLANATION	SYMBOL	EXPLANATION
F	The samples are NOT IN COMPLIANCE with the requirement of this subclause	NE	Not Evaluated
P	The samples are IN COMPLIANCE with the requirement of this subclause	NPR	Not Present
NA	Not Applicable	PR	Present
NR	Not Requested	R	Refer to the Comment Section

Test Report

1. MECHANICAL & PHYSICAL PROPERTIES (EN 71-1:2005+A9:2009)

RESULTS:

SUBCLAUSE	REQUIREMENT	RESULT
4	**GENERAL REQUIREMENTS**	**P**
4.1	Material	P
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	Edges	P
4.8	Points and metallic wires	P
4.9	Protruding parts	NA
4.10	Parts moving against each other	NA
4.11	Mouth actuated toys	NA
4.12	Balloons	NA
4.13	Cords of toy kites and other flying toys	NA
4.14	Enclosures	NA
4.15	Toys intended to bear the mass of a child	NA
4.16	Heavy immobile toys	NA
4.17	Projectiles	NA
4.18	Aquatic toys	NA
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	NA
4.20	Acoustics	NA
4.21	Toys containing a non-electrical heat source	NA
4.22	Small balls	NA
4.23	Magnets	NA
5	**TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS**	**NA**
6	**PACKAGING**	**NA**

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SUBCLAUSE	REQUIREMENT	RESULT
7	**WARNINGS AND INSTRUCTIONS FOR USE**	**P**
7.1	General	P
7.2	Toys not intended for children under 36 months	P
7.3	Latex balloons	NA
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectiles	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inline skates and toy skateboards	NA
7.11	Toys intended to be strung across a cradle, cot, or perambulator	NA
7.12	Liquid-filled teethers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	NA
7.15	Toy bicycles	NA
7.16	Toys intended to bear the mass of a child	NA
7.17	Toys comprising monofilament fibres	NA
7.18	Toy scooters	NA
7.19	Rocking horses and similar toys	NA
7.20	Magnetic/electrical experimental sets	NA

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2. FLAMMABILITY PROPERTIES (EN 71-2:2006+A1:2007)

RESULTS:

SUBCLAUSE	REQUIREMENT	RESULT
4	**REQUIREMENTS**	**P**
4.1	General	P
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
4.4	Toys intended to be entered by a child	NA
4.5	Soft-filled toys with a piled or textile surface	NA

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IDENTIFICATION PARTS			
No.	**Description**	**Position**	**Color**
1	Textile material	Wooden character (82409/82410)	Felt thickness 1.5mm, Light Blue (Polyester) (EN71-3 result transfer from09-5885#8)
2	Coating material	Hexagon nut, bolt - regular 50mm (82409/82410)	107C Yellow (just the German paint in yellow) (Water-based varnish) (result transfer from IISG 09-5885#2)
3	Coating material	Hexagon nut, bolt - small 25mm (82409/82410)	1375C Orange (mixed by red & yellow) (Water-based varnish) (result transfer from IISG 09-5885#1,2)
4	Coating material	Hexagon nut, bolt - mini 18mm (82409/82410)	172C Dk.orange (mixed by red & yellow) (Water-based varnish) (result transfer from IISG 09-5885#1,2)
5	Coating material	Squared cube (82409/82410)	2728C Blue (dark blue mixed with more water) (Water-based varnish) (result transfer from IISG 09-5885#4)
6	Coating material	Squared cube, hexagon nut, bolt - large 66mm (82409/82410)	367C Green (mixed by blue & yellow) (Water-based varnish) (result transfer from IISG 09-5885#2,4)
7	Coating material	Wooden character (82409/82410)	11C cool grey (NC varnish) (result transfer from 09-150#1)
8	Coating material	Wooden character (82409/82410)	1505C Orange (NC varnish) (result transfer from 09-150#10)
9	Coating material	Wooden character (82409/82410)	172C Dk.orange (NC varnish) (result transfer from 09-150#11)
10	Coating material	Wooden character (82409/82410)	2727C Dk.blue (NC varnish) (result transfer from 09-150#14)
11	Coating material	Wooden character (82409/82410)	2728C Dk.blue (NC varnish) (result transfer from 09-150#7)
12	Other material	Wooden bare with Holes (82409/82410)	Lt.brown wood (Beech wood) (EN71-3, formaldehyde result transfer from 10-3253#8)
13	Other material	All other wood (82409/82410)	Lt.brown wood (Tea wood) (EN71-3, formaldehyde result transfer from 10-3253#8)

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RESULTS:

3.	Migration of certain elements

Method: European Standard EN71-3:1994/ A1:2000/ AC:2000/ AC:2002

Instrument: ICP-Plasma Spectrometer

Principle: The soluble elements are extracted by hydrochloric acid 0.07N and determined spectrometrically

Parts	mg	Pb	Cd	Cr	Ba	Sb	As	Se	Hg
1	35.3	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2		< 10	< 10	< 10	20	< 10	< 10	< 10	< 10
3	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4		< 10	< 10	< 10	38	< 10	< 10	< 10	< 10
5		< 10	< 10	< 10	42	< 10	< 10	< 10	< 10
6		< 10	< 10	< 10	37	< 10	< 10	< 10	< 10
7	13.7	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
8	13.6	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
9	13.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
10	16.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
11	10.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
12		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
13		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Limits		**90**	**75**	**60**	**1000**	**60**	**25**	**500**	**60**

Note: The results are expressed in mg/kg. The symbol < followed by a number indicates that the concentration of the element is less than the detection limit expressed by that number. The value in mg following a part indicates the part quantity used for the test. It is indicated only if the part present in the sample is less than 100 mg (See EN 71/3 - Par. 10) The elements determined are: Pb - Soluble Lead; Cr - Soluble Chromium; Hg - Soluble Mercury; Sb - Soluble Antimony; Cd - Soluble Cadmium; Ba - Soluble Barium; Se - Soluble Selenium; As - Soluble Arsenic.

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4.	Total Lead and Cadmium Content

Method: EN 1122:2001 (method B)

Instrument: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Principle: The sample was dissolved by sulfuric acid and hydrogen peroxide treatment and analyzed by ICP-Inductively Coupled Plasma

Parts	Lead	Cadmium
2	< 20 mg/kg	< 20 mg/kg
3	< 20 mg/kg	< 20 mg/kg
4	< 20 mg/kg	< 20 mg/kg
5	< 20 mg/kg	< 20 mg/kg
6	< 20 mg/kg	< 20 mg/kg
7	< 20 mg/kg	< 20 mg/kg
8	< 20 mg/kg	< 20 mg/kg
9	< 20 mg/kg	< 20 mg/kg
10	< 20 mg/kg	< 20 mg/kg
11	< 20 mg/kg	< 20 mg/kg
Limits	**Not Detectable (< 20 mg/kg)**	**100 mg/kg**

Note: The results are expressed in mg/kg. The symbol < followed by a number indicates that the concentration is less than the detection limit expressed by that number.

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5.	Determination of certain Azo-dyes

Method: EN 14362-1/2:2003

Instrument: H.P.L.C. with DAD detector - GC with MS detector.

Principle: The sample is treated pH 6, 70°C and analyzed by H.P.L.C. with DAD detector and GC with MS detector

			Parts
N.	**Name of Amines**	**CAS N.**	**1**
1	4-Aminodiphenyl	92-67-1	ND
2	Benzidine	92-87-5	ND
3	4-Chloro-o-Toluidine	95-69-2	ND
4	2-Naphthylamine	91-59-8	ND
5	o-Aminoazotoluene	97-56-3	ND
6	2-Amino-4-Nitrotoluene	99-55-8	ND
7	p-Chloroaniline	106-47-8	ND
8	2,4-Diaminoanisole	615-05-4	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	ND
10	3,3'-Dichlorobenzidine	91-94-1	ND
11	3,3'-Dimethoxybenzidine	119-90-4	ND
12	3,3'-Dimethylbenzidine	119-93-7	ND
13	3,3'-Dimethyl-4,4'-Diaminodiphenylmethane	838-88-0	ND
14	p-Cresidine	120-71-8	ND
15	4,4'-Methylene-bis-(2-Chloroaniline)	101-14-4	ND
16	4,4'-Oxydianiline	101-80-4	ND
17	4,4'-Thiodianiline	139-65-1	ND
18	o-Toluidine	95-53-4	ND
19	2,4'-Toluylenediamine	95-80-7	ND
20	2,4,5-Trimethylaniline	137-17-7	ND
21	o-Anisidine	90-04-0	ND
22	4-Aminoazobenzene	60-09-3	ND
Limit			**30 ppm**

Note:
Method detection limit = 10 ppm
ppm denotes part(s) per million
ND denotes Non Detected

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6.	Determination of Formaldehyde release

Method: EN 717-3:1996

Instrument: Spectrophotometer (Wavelenght 412 nm)

Principle: A weighed wood based panel specimen is suspended over water in a closed container. The container is placed in an oven at a controlled temperature for a specified length of time. The amount of formaldehyde absorbed by the water is then determined colorimetrically.

Parts	Extracted Formaldehyde (mg/kg)
12	< 20 mg/kg
13	< 20 mg/kg
Limits	**80 mg/kg**

Note: The results are expressed in mg/kg.The symbol < followed by a number indicates that the concentration of the substance is less than the detection limit expressed by that number.

7.	Determination of pentachlorophenol

Method: UNI 11057 : 2003 mod.

Instrument: Gas Chromatograph - Mass Detector (MS)

Principle: Solvent extraction followed by cromatographic analysis

Parts	Pentachlorophenol
12	< 1 mg/kg
13	< 1 mg/kg
Limits	**1000 mg/kg**

Note: The Pentachlorophenol content is expressed in mg/kg of sample. The symbol < followed by a number indicates that the concentration of the benzene is less than the detection limit expressed by that number.

*******END OF TEST REPORT*******