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LABORATORY OF MATERIAL
ENGINEERING AND ENVIRONMENT



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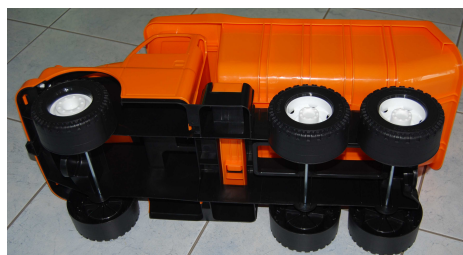
REPORT No. 337/DLS/2014

Testing the safety of Tatra 148 truck toy, manufactured by Dino Toys s.r.o.

Orderer: DinoToys s.r.o.
295 01 Mnichovo Hradiště
K Pískovně 108
Czech Republic

Project No.: UP/DLS-17796/OR

Name of tested object	Tatra 148 car toy sample
Orderer markings:	mark: 645011, bar code: 8590878645011, Orderer No.: 1/2014
Numbers of samples according to R-DLS/7	337/14/P1



Date of delivery of the object for testing: 03.07.2014.
Date of beginning the tests / tests completion: 18.07.2014 / 29.07.2014
Place of testing: Laboratory of Material Engineering and Environment

Sample number	Conformity / nonconformity with the requirements	
PN-EN 71-1+A2:2014-02 Standard “Safety of toys. Part 1. Mechanical and physical properties”		
337/14/P1	item 4.1 General requirements. Material cleanliness	+
	item 4.7 General requirements. Edges, point a), c)	+
	item 4.8 General requirements. Points and metallic wires, point e)	+
	item 4.9 General requirements. Protruding parts	-
	item. 4.10.3 General requirements. Parts moving against each other. Hinges	+
	item 4.15.1.1 General requirements. Toys intended to bear the mass of a child. Toys propelled by a child or by other means. General	-

Sample number	Conformity / nonconformity with the requirements	
337/14/P1	item 4.15.1.3 General requirements. Toys intended to bear the mass of a child. Toys propelled by a child or by other means. Strength, point a), b)	+
	item 4.15.1.3 General requirements. Toys intended to bear the mass of a child. Toys propelled by a child or by other means. Strength, point d)	-
	item 4.15.1.4 General requirements. Toys intended to bear the mass of a child. Toys propelled by a child or by other means. Stability	+
	item 5.1 Toys intended for children under 36 months. General requirements, point a), b)	+
PN-EN 71-2+A1:2014-06 Standard "Safety of toys. Part 2. Flammability"		
337/14/P1	item 4.1 General requirements	+

signs: "+" – conform to the requirements "-" – not conform to the requirements

Note: Confirmation of conformity with the requirements is based on a confidence level of 95% for the expanded uncertainty of measurement results on which the decision of conformity is based.

Leader of testing team: *Bożena Rakwicz, Ph.D. Eng.*

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Members of testing team: *Magdalena Sieczkowska, M.Sc. Eng.*

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Robert Wojtynek, M.Sc. Eng.

Authorized by: *Beata Grynkiewicz-Bylina, Ph.D., Prof. at KOMAG*

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Approved by

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prof. nadzw. ITG KOMAG

Gliwice, 30.07.2014

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TEST REPORT INCLUDES ONLY THE RESULTS, WHICH ARE RELATED TO THE TESTED OBJECT.
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Description of toy sample

Dimensions:	toy: length x width x height: 700 mm x 270 mm x 315 mm packaging: length x width x height: 720 mm x 280 mm x 320 mm
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The Tatra 148 truck toy sample consists of the following components:

- orange cabin with white cooler and headlights,
- black chassis with three metal axles with black wheels and white rims,
- orange, hinged loading box with a handle,
- movable orange blockade (connector) of load box,

which are press-fitted.

The toy components, according to the information declared by the Orderer's, marked as follows:

- P110020011 – axle,
- W2310001 – chassis,
- W2311001 – cabin,
- W2312001 – load box,
- W2313001 – cooler,
- W2313102 – blockade (connector),
- W2314001 – rims,
- W2315001 – wheels.

Cabin, cooler, chassis, load box, blockade (connector) and rims, according to Orderer's data, are made of T634 plastic, and wheels are made of T610 plastic.

The toy has a cardboard packaging.

The toy, according to Orderer's marking, is intended for children over 1 year.

Weight of the toy is: (2.6±0.2) kg.

The toy sample was taken and delivered for testing by the Orderer.

Range and methods of testing

Item	Tested parameters	Testing methods	Standard PN-EN 71-1+A3:2014-06
1.	dimension, accessibility	test with use of the probe	item 4.10.3, 8.2, 8.4.2.1
2.	mass	direct measurement	item 4.10.3, 5.1 point b)
3.	strength to twisting	torque test using torque (0.34±0.01)Nm	item 8.3
4.	tensile strength	tension test with force (60.0±1.0)N	item 8.4.2.3
5.		tension test with force (90.0±1.0)N	item 8.4.2.1
6.	resistance to fall	drop test (850±10)mm	item 8.5
7.	resistance to impact	impact test with mass (1.00±0.01)kg dropped from (100±2)mm	item 8.7
8.	compression strength	compression test with force (110.0 ± 1.0)N	item 8.8
9.	static strength	static strength test with mass (25.0±0.2)kg and (50.0±0.2)kg	item 8.21
10.	dynamic strength	dynamic strength test with mass (29.4±0,2)kg and (54.4±0,2)kg	item 8.22.3
11.	stability	stability test with mass (25.0±0.2)kg and (50.0±0.2)kg	item 8.23.1
12.	sharpness of edges	testing with use of torsional mandrel	item 8.11

Note: measurement uncertainty U is an extended uncertainty at confidence level 95% and extension coefficient k=2, according to the general instruction IO-DLS/03.

According to the agreement with the Orderer the scope of testing of Tatra 148 truck toy (sample 337/14/P1) didn't cover assessment of markings and warnings completeness according to item 4.15.1.2 and 7 of the PN-EN 71-1+A3:2014-06 Standard.

The tested toy has a packaging in a form of cardboard box, not subjected to the requirements according to item 6 of the PN-EN 71-1+ A3:2014-06 Standard.

Flammability was assessed according to item 4.1 of the PN-EN 71-2:2011 Standard and PB-DLS/06 procedure, edition 9, 2014.

Test results

During testing the mechanical and physical properties the condition of Tatra 148 truck toy, sample 337/14/P1, changed. During

- tension test the blockade (connector) was detached,
 - drop test the cap of rear wheel was detached,
- which were not small components.

During dynamic strength test with mass (54.4±0.2)kg the sample collapsed, the protection of axles of front wheels was detached and the metal axle, which is the protruding part, became available.

Item	Sample name	Sample number	Name of test	Test result	
1.	Tatra 148	337/14/P1	direct weight measurement	mass of the load box is: (0,7±0.2) kg, mass of the chassis with cabin is: (1.9±0.2) kg	
2.	Tatra 148: hinge connecting the load box with the chassis		hinge testing with use of the probe	during the test it is not possible to insert the control probe of diameters 5 mm to the clearance between edges along the hinges line	
3.	Tatra 148: cooler		testing the accessibility with use of the probe	during tests it was not possible to insert gap gauge between element and body to a depth greater than 2 mm using force (10.0±0.5)N	
4.			torque test	during the test none of parts were separated	
5.			tension test – protective components	during the test none of parts were separated	
6.			tension test	during the test one part (blockage) was separated, none of dangerous edges and points became available	
7.			test with use of the probe	during the test sample (blockage) did not fit entirely in small part cylinder	
8.			drop test	during the test one part (rear wheel cap) was detached, none of dangerous edges and points became available	
9.			test with use of the probe	during the test sample (cap) did not fit entirely in small part cylinder	
10.			impact test	during test none of dangerous parts, edges and points became available	
11.			compression test		
12.			Tatra 148	static strength test with mass (25.0±0.2)kg	during test none of dangerous parts, edges and points became available and the sample did not collapse
13.				static strength test with mass (50.0±0.2)kg	
14.	dynamic strength test with mass (29.4±0.2)kg			during test none of dangerous parts, edges and points became available and the sample did not collapse	
15.	dynamic strength test with mass (54.4±0.2)kg			during test the sample collapsed, none of dangerous edges and points became available. The protection of axles of front wheels was detached and the axle, which is the protruding part, became available	
16.	stability test with mass (25.0±0.2)kg			during tests the sample did not tip over	
17.	stability test with mass (50.0±0.2)kg				



Item	Sample name	Sample number	Name of test	Test result
18.	Tatra 148: axle of front wheels	337/14/P1	testing the sharpness of edges	during test the tape was not cut

Note: measurement uncertainty U is an extended uncertainty at confidence level 95% and extension coefficient $k=2$, according to the general instruction IO-DLS/03.

The results and their uncertainty refer only to the tested sample and not to the product batch/ substance/ material the sample was taken from.

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Dino Toys s.r.o. x 1

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