

Report No.: 0154078514a 006

Page 1 of 37

Client: FORM_S
VELIKA ARNAUTSKA 33 - 65125 - ODESSA - UKRAINE

Supplier's name: N/A

Identification / Model No(s): Neon Highlighter Pencils\
Refer to detail list (Page 2)

Sample Receiving Date: 2014-12-10

Testing Period: 2014-12-10 - 2014-12-30

Test specification:
Customer's requirement:
Test result:

- | | |
|---|---------------------------|
| 1. EN71-3:2013+A1:2014 Migration of 19 Elements | PASS |
| 2. EN 71 - 9 : 2005 / A1 : 2007; EN 71 - 10 and 11 : 2005 Table 2B Colorants | PASS |
| 3. EN 71 - 9 : 2005 / A1 : 2007; EN 71 - 10 and 11 : 2005 Table 2C Primary Aromatic Amines | PASS |
| 4. ASTM F963-11 Sect. 4.3.5.1 and CPSIA Sect. 101: Total lead content in paint and coating materials | PASS |
| 5. ASTM F963-11 Sect. 4.3.5.2 and CPSIA Sect. 101: Total lead content in substrate materials | PASS |
| 6. Formaldehyde content | Please refer to test page |
| 7. Banned azo dyes | PASS |
| 8. Polycyclic aromatic hydrocarbons (PAHs) - 1907/2006/EC with Amendment No. 552/2009 EC Annex XVII Item No. 50 and (EU) No.1272/2013 | PASS |
| 9. Polycyclic aromatic hydrocarbons (PAHs) - ZEK 01.4-08 | PASS |
| 10. Total Cadmium Content | PASS |
| 11. Phthalates Content | PASS |
| 12. Benzene, Toluene and Xylene content | Please refer to test page |
| 13. Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA) | Please refer to test page |

**For and on behalf of
TÜV Rheinland (Shanghai) Co., Ltd.**

2015-01-04


Wice Wang / Section 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.

Test Report No.: 0154078514a 006

Page 2 of 37

Product Information		
Product Code	Type	Product Description
5500B-6CB	Neon	"7"" 6 neon color pencil, hex, black wood, painted as lead, stamped*1, end cut

Test Report No.: 0154078514a 006
Page 3 of 37
Material list

Material No.	Material	Color	Location
M001	Materials intended to leave a trace	Fluorescent Yellow	Y01-L
M002	Materials intended to leave a trace	Fluorescent Orange	Y03-L
M003	Materials intended to leave a trace	Fluorescent Pink	Y04-L
M004	Materials intended to leave a trace	Fluorescent Red	Y05-L
M005	Materials intended to leave a trace	Fluorescent Green	Y06-L
M006	Materials intended to leave a trace	Fluorescent Blue	Y07-L
M007	Coating	Fluorescent Yellow	Y01-P
M008	Coating	Fluorescent Orange	Y03-P
M009	Coating	Fluorescent Pink	Y04-P
M010	Coating	Fluorescent Red	Y05-P
M011	Coating	Fluorescent Green	Y06-P
M012	Coating	Fluorescent Blue	Y07-P
M013	Wood + coating	Fluorescent yellow	Refer to photo
M014	Wood + coating	Fluorescent orange	Refer to photo
M015	Wood + coating	Fluorescent pink	Refer to photo
M016	Wood + coating	Fluorescent red	Refer to photo
M017	Wood + coating	Fluorescent green	Refer to photo
M018	Wood + coating	Fluorescent blue	Refer to photo

Test Report No.: 0154078514a 006

Page 4 of 37

1. EN71-3:2013+A1:2014 Migration of 19 Elements

Test Method: with reference to EN71-3:2013+A1:2014, for inorganic elements, analyzed by ICP-OES or ICP-MS.

1) For dry, brittle, powder-like or pliable toy materials :

				Test No.	T001	T002	T003
				Material No.	Y01-L	Y03-L	Y04-L
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	
Aluminium (Al)	mg/kg	10	5625	106	125	118	
Antimony (Sb)	mg/kg	1	45	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	0.5	3.8	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	1500	n.d.	n.d.	n.d.	
Boron (B)	mg/kg	10	1200	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	0.1	1.3	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))	mg/kg	1	37.5	n.d.(*2)	n.d.(*2)	n.d.(*2)	
Chromium (VI) (Cr (VI))	mg/kg	0.015	0.02	n.d.(*2)	n.d.(*2)	n.d.(*2)	
Cobalt (Co)	mg/kg	0.5	10.5	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	622.5	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	0.5	13.5	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	1200	n.d.	n.d.	n.d.	
Mercury (Hg)	mg/kg	0.5	7.5	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	75	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	2.5	37.5	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	4500	n.d.	n.d.	2.8	
Tin (Sn)	mg/kg	0.2	15000	n.d.	n.d.	n.d.	
Organic Tin [^]	mg/kg	0.2	0.9	-	-	-	
Zinc (Zn)	mg/kg	10	3750	16.4	14.7	57.3	

Test Report No.: 0154078514a 006

Page 5 of 37

				Test No.	T004	T005	T006
				Material No.	Y05-L	Y06-L	Y07-L
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	5625	141	115	118	
Antimony (Sb)	mg/kg	1	45	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	0.5	3.8	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	1500	n.d.	31.4	n.d.	
Boron (B)	mg/kg	10	1200	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	0.1	1.3	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))	mg/kg	1	37.5	n.d.(*2)	n.d.(*2)	n.d.(*2)	
Chromium (VI) (Cr (VI))	mg/kg	0.015	0.02	n.d.(*2)	n.d.(*2)	n.d.(*2)	
Cobalt (Co)	mg/kg	0.5	10.5	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	622.5	n.d.	n.d.	5.1	
Lead (Pb)	mg/kg	0.5	13.5	n.d.	n.d.	0.9	
Manganese (Mn)	mg/kg	2.5	1200	n.d.	n.d.	n.d.	
Mercury (Hg)	mg/kg	0.5	7.5	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	75	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	2.5	37.5	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	4500	n.d.	3.0	n.d.	
Tin (Sn)	mg/kg	0.2	15000	n.d.	n.d.	n.d.	
Organic Tin [^]	mg/kg	0.2	0.9	-	-	-	
Zinc (Zn)	mg/kg	10	3750	56.8	208	n.d.	

Abbreviation: n.d. = Not Detected (< RL)
 RL = Reporting Limit
 mg/kg denotes milligram per kilogram
[^] denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (0.3 mg/kg)

Test Report No.: 0154078514a 006

Page 6 of 37

3) For scraped-off toy materials:

				Test No.	T007	T008	T009
				Material No.	Y01-P	Y03-P	Y04-P
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	87.7	76.9	126	
Antimony (Sb)	mg/kg	1	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	1	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	n.d.	n.d.	n.d.	
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	n.d.	n.d.	n.d.	
Mercury (Hg)	mg/kg	1	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	2.5	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	n.d.	n.d.	n.d.	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin^	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	20.1	n.d.	n.d.	

Test Report No.: 0154078514a 006

Page 7 of 37

Test No.				T010	T011	T012
Material No.				Y05-P	Y06-P	Y07-P
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	64.2	n.d.	18.3
Antimony (Sb)	mg/kg	1	560	n.d.	n.d.	n.d.
Arsenic (As)	mg/kg	1	47	n.d.	n.d.	n.d.
Barium (Ba)	mg/kg	2.5	18750	2.8	70.7	66.2
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.
Manganese (Mn)	mg/kg	2.5	15000	3.4	n.d.	3.5
Mercury (Hg)	mg/kg	1	94	n.d.	n.d.	n.d.
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.
Selenium (Se)	mg/kg	2.5	460	n.d.	n.d.	n.d.
Strontium (Sr)	mg/kg	2.5	56000	n.d.	5.3	7.6
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.
Organic Tin [^]	mg/kg	1.0	12	-	-	-
Zinc (Zn)	mg/kg	10	46000	13.3	10.2	10.8

Abbreviation: n.d. = Not Detected (< RL)
 RL = Reporting Limit
 mg/kg denotes milligram per kilogram
 § denotes Cr(III) and Cr(VI) are not necessary to be determined when the Combined Chromium concentration value is less than the requirement
 ^ denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.9 mg/kg) or the components were confirmed to be pure metal

Remark:

- *1 The cadmium requirement is following 2012/7/EU, as of 3 Mar 2012. This restriction will come into effect starting from 20 July 2013 onwards.
- *2 Confirmation of Cr(VI) content has been performed with reference to +A1:2014 , Annex F (analyzed by LC-ICP-MS or IC-ICP-MS/MS). Cr(III) content was confirmed by calculation.

Test Report No.: 0154078514a 006

Page 8 of 37

2.EN 71 - 9 + A1/2007; 10-11/2005 Table 2B Colourants

Test Method: EN 71 - 10 and 11 : 2005 for Table 2B Colourants

Test Result:

					Test No.	T001	T002	T003
					Material No.	Y01-L + Y03-L + Y04-L	Y05-L + Y06-L + Y07-L	Y01-P + Y03-P + Y04-P
Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Result	Result	Result	
Disperse Blue 1	2475-45-8	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Blue 3	2475-46-9	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Blue 106	12223-01-7	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Blue 124	61951-51-7	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Orange 3	730-40-5	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Orange 37/76	12223-33-5; 13301-61-6	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Yellow 3	2832-40-8	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Red 1	2872-52-8	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Solvent Yellow 1	60-09-3	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Solvent Yellow 2	60-11-7	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Solvent Yellow 3	97-56-3	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Basic Red 9	569-61-9	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Basic Violet 1	8004-87-3	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Basic Violet 3	548-62-9	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Acid Red 26	3761-53-3	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Acid Violet 49	1694-09-3	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	
Disperse Blue 35*	12222-75-2	mg/kg	10	10 (Action Limit)	n.d.	n.d.	n.d.	

Test Report No.: 0154078514a 006

Page 9 of 37

					Test No.	T004
					Material No.	Y05-P + Y06-P + Y07-P
Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Result	
Disperse Blue 1	2475-45-8	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Blue 3	2475-46-9	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Blue 106	12223-01-7	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Blue 124	61951-51-7	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Orange 3	730-40-5	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Orange 37/76	12223-33-5; 13301-61-6	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Yellow 3	2832-40-8	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Red 1	2872-52-8	mg/kg	10	10 (Action Limit)	n.d.	
Solvent Yellow 1	60-09-3	mg/kg	10	10 (Action Limit)	n.d.	
Solvent Yellow 2	60-11-7	mg/kg	10	10 (Action Limit)	n.d.	
Solvent Yellow 3	97-56-3	mg/kg	10	10 (Action Limit)	n.d.	
Basic Red 9	569-61-9	mg/kg	10	10 (Action Limit)	n.d.	
Basic Violet 1	8004-87-3	mg/kg	10	10 (Action Limit)	n.d.	
Basic Violet 3	548-62-9	mg/kg	10	10 (Action Limit)	n.d.	
Acid Red 26	3761-53-3	mg/kg	10	10 (Action Limit)	n.d.	
Acid Violet 49	1694-09-3	mg/kg	10	10 (Action Limit)	n.d.	
Disperse Blue 35*	12222-75-2	mg/kg	10	10 (Action Limit)	n.d.	

Abbreviation: n.d. = Not Detected (< Reporting Limit)
 RL = Reporting Limit
 mg/kg = milligram per kilogram
 NA = Not Applicable

Remark:

- * According to the BfR-recommendations (Bundesinstitut für Risikobewertung), Disperse blue 35 is analysed additionally.

Test Report No.: 0154078514a 006

Page 10 of 37

3.EN 71 - 9 + A1/2007; 10-11/2005 Table 2C Primary Aromatic Amines

Test Method: EN 71 - 10 and 11 : 2005 for Table 2C Primary Aromatic Amines

Test Result:

					Test No.	T001	T002	T003
					Material No.	Y01-L + Y03-L + Y04-L	Y05-L + Y06-L + Y07-L	Y01-P + Y03-P + Y04-P
Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Result	Result	Result	
Benzidine	92-87-5	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
2-Naphthylamine	91-59-8	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
4-Chloroaniline	106-47-8	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
3,3'-Dichlorobenzidine	91-94-1	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
3,3'-Dimethylbenzidine	119-93-7	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
o-Toluidine	95-53-4	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
2-Methoxyaniline (o-Anisidine)	90-04-0	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	
Aniline	62-53-3	mg/kg	5	5 (Action Limit)	n.d.	n.d.	n.d.	

					Test No.	T004
					Material No.	Y05-P + Y06-P + Y07-P
Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Result	
Benzidine	92-87-5	mg/kg	5	5 (Action Limit)	n.d.	
2-Naphthylamine	91-59-8	mg/kg	5	5 (Action Limit)	n.d.	
4-Chloroaniline	106-47-8	mg/kg	5	5 (Action Limit)	n.d.	
3,3'-Dichlorobenzidine	91-94-1	mg/kg	5	5 (Action Limit)	n.d.	
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	5	5 (Action Limit)	n.d.	
3,3'-Dimethylbenzidine	119-93-7	mg/kg	5	5 (Action Limit)	n.d.	
o-Toluidine	95-53-4	mg/kg	5	5 (Action Limit)	n.d.	
2-Methoxyaniline (o-Anisidine)	90-04-0	mg/kg	5	5 (Action Limit)	n.d.	
Aniline	62-53-3	mg/kg	5	5 (Action Limit)	n.d.	

Abbreviation: n.d. = Not Detected (< Reporting Limit)
 RL = Reporting Limit
 mg/kg = milligram per kilogram
 NA = Not Applicable

Test Report No.: 0154078514a 006

Page 11 of 37

4.ASTM F963-11 Sect. 4.3.5.1 and CPSIA Sect. 101: Total lead content in paint and coating materials

Test Method: CPSC-CH-E1003-09.1 (Microwave method)

Test result

ASTM F963-11 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 No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	Y01-P + Y03-P + Y04-P	Total Pb	ppm	10	90	n.d.
T002	Y05-P + Y06-P + Y07-P	Total Pb	ppm	10	90	n.d.

Abbreviation: n.d. = Not Detected (< RL)
 RL = Reporting Limit
 ppm = parts per million

Remark:

Requirement according to Consumer Product Safety Improvement Act 2008 Public Law 110-314, 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

Test Report No.: 0154078514a 006

Page 12 of 37

5.ASTM F963-11 Sect. 4.3.5.2 and CPSIA Sect. 101: Total lead content in substrate materials

Test Method: CPSC-CH-E1001-08.3 and CPSC-CH-E1002-08.3 (Microwave method)

Test result

ASTM F963-11 Sect. 4.3.5.2	Total lead content in substrate materials	PASS
CPSIA Sect. 101	Total lead content in substrate materials	PASS

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	Y01-L + Y03-L + Y04-L	Total Pb	ppm	10	100	n.d.
T002	Y05-L + Y06-L + Y07-L	Total Pb	ppm	10	100	n.d.

Abbreviation: n.d. = Not Detected (< RL)
 RL = Reporting Limit
 ppm = parts per million

Test Report No.: 0154078514a 006

Page 13 of 37

Remark:

Requirement according to Consumer Product Safety Improvement Act 2008 Public Law 110-314, 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

- *1 According to Consumer Product Safety Commission, exemptions for lead as used in certain parts of children's electronic devices, the following lead-containing components are granted the exemptions :
- a) Glass of cathode ray tubes, electronic components and fluorescent tubes
 - b) As an alloying element in steel, the maximum amount of lead shall be less than 0.35% by weight (3,500 ppm);
 - c) Used the manufacture of aluminum, the maximum amount of lead shall be less than 0.4% by weight (4,000 ppm);
 - d) Used in copper-based alloys, the maximum amount of lead shall be less than 4% by weight (40,000 ppm);
 - e) Lead-bronze bearing shells and bushings;
 - f) Compliant pin connector systems;
- *2 According to Consumer Product Safety Commission, the following materials are exempted based on they are untreated and unadulterated with respect to the addition of materials or chemicals, including pigments, dyes, coatings, finishes or any other substance, and that do not undergo any processing that could result in the addition of lead into the product or material:
- a) Precious gemstones: diamond, ruby, sapphire or emeralds;
 - b) Semiprecious gemstones provided that the mineral or material is not based on lead and is not associated with mineral based on lead or lead compounds;
 - c) Natural or cultured pearls;
 - d) Wood;
 - e) Paper and similar materials made from wood or cellulosic fiber;
 - f) Dyed or undyed textiles (cotton, wool, hemp, nylon, yam, etc.);
 - g) CMYK process printing inks;
- *3 According to H.R. 2715, the following functional purpose children's products are granted the exemptions:
- a) Off-highway motorized vehicles;
 - b) Bicycles and related products (the lead limit for metal components described in June 20, 2009 "Notice of Stay of Enforcement Pertaining to Bicycles and Related Products" continue to be applied until December 31, 2011. After the date, these metal components must meet a 300 ppm total lead limit.);
 - c) Resale of used children's products (excluding children's jewelry or any children's product for which known to be violated the lead limit).
- *4 According to Consumer Product Safety Commission, the aluminum alloy components on children's ride-on tractors, children's ride-on cars, and other ride-on toys for children ages 3 years and older are granted to have a 300 ppm lead limit.

Test Report No.: 0154078514a 006

Page 14 of 37

6. Formaldehyde content

Test Method: ISO 71226: 2008

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	Y01-L + Y03-L + Y04-L	Formaldehyde content	mg/kg	10	n.d.
T002	Y05-L + Y06-L + Y07-L	Formaldehyde content	mg/kg	10	n.d.
T003	Y01-P + Y03-P + Y04-P	Formaldehyde content	mg/kg	10	n.d.
T004	Y05-P + Y06-P + Y07-P	Formaldehyde content	mg/kg	10	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)

RL = Reporting Limit

mg/kg = milligram per kilogram

Remark:

*1 The sample was packed in polyethylene bag and wrapped by aluminum foil prior to test.

Test Report No.: 0154078514a 006

Page 15 of 37

7.Banned azo dyes (1907/2006/EC) (modified)

Test Method: EN 14362-1:2012

Test result:

Test No.	Material No.	Test Parameter	Method	Unit	RL	Customer's Requirement	Result
T001	Y01-L + Y03-L + Y04-L	Azo dyes	EN 14362-1	mg/kg	5	30	n.d.
T002	Y05-L + Y06-L + Y07-L	Azo dyes	EN 14362-1	mg/kg	5	30	n.d.
T003	Y01-P + Y03-P + Y04-P	Azo dyes	EN 14362-1	mg/kg	5	30	n.d.
T004	Y05-P + Y06-P + Y07-P	Azo dyes	EN 14362-1	mg/kg	5	30	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)

RL = Reporting Limit

mg/kg = milligram per kilogram

Test Report No.: 0154078514a 006

Page 16 of 37

Remark:

- * The CAS-number 97-56-3 (A5) and 99-55-8 (A6) are further reduced to CAS-number 95-53-4 (A18) and 95-80-7 (A19).
- ** Azo colorants that are able to form CAS-number 60-09-03 (A22), generate under the condition of this method CAS-number 62-53-3 (A25) and 106-50-3 (A26).
- *** Azo colorants that are able to form 4-aminoazobenzene (A22), is confirmed by EN 14362-3:2012 / ISO 17234-2:2011.
- **** Azo colorants are detected & quantified by GC/MS and confirmed by LC/MS.
- ^ Additional azo colorants were tested according to customer's requirement.

ID	Azo colorant	CAS No.	ID	Azo colorant	CAS No.
A1	biphenyl-4-ylamine / 4-aminobiphenyl / xenylamine	92-67-1	A14	p-cresidine	120-71-8
A2	benzidine	92-87-5	A15	4,4'-methylene-bis-(2-chloro-aniline) / 2,2'-dichloro-4,4'-methylene-dianiline	101-14-4
A3	4-chloro-o-toluidine	95-69-2	A16	4,4'-oxydianiline	101-80-4
A4	2-naphthylamine	91-59-8	A17	4,4'-thiodianiline	139-65-1
A5*	o-aminoazotoluene / 4-amino-2',3'-dimethylazobenzene / 4-o-tolylazo-o-toluidine	97-56-3	A18	o-toluidine / 2-aminotoluene	95-53-4
A6*	5-nitro-o-toluidine	99-55-8	A19	4-methyl-m-phenylenediamine	95-80-7
A7	4-chloroaniline	106-47-8	A20	2,4,5-trimethylaniline	137-17-7
A8	4-methoxy-m-phenylenediamine	615-05-4	A21	o-anisidine / 2-methoxyaniline	90-04-0
A9	4,4'-methylenedianiline / 4,4'-diaminodiphenylmethane	101-77-9	A22**	4-aminoazobenzene	60-09-3
A10	3,3'-dichlorobenzidine / 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1	A23^	2,4-xylydine	95-68-1
A11	3,3'-dimethoxybenzidine	119-90-4	A24^	2,6-xylydine	87-62-7
A12	3,3'-dimethylbenzidine / 4,4'-bi-o-toluidine	119-93-7	A25	Aniline	62-53-3
A13	4,4'-methylenedi-o-toluidine	838-88-0	A26	4-aminoaniline	106-50-3

Test Report No.: 0154078514a 006

Page 17 of 37

**8.Polycyclic aromatic hydrocarbons (PAHs) - 1907/2006/EC with Amendment No. 552/2009
 EC Annex XVII Item No. 50 and (EU) No.1272/2013**

Test Method: Organic solvent extraction, GCMS

					Test No.	T001	T002	T003
					Material No.	Y01-L + Y03-L	Y04-L + Y05-L	Y06-L + Y07-L
Test Parameter	CAS NO	Unit	RL	Regulatory Requirement	Result	Result	Result	
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo(e)pyrene	192-97-2	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[a]anthracene	56-55-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Chrysene	218-01-9	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	

					Test No.	T004	T005	T006
					Material No.	Y01-P + Y03-P	Y04-P + Y05-P	Y06-P + Y07-P
Test Parameter	CAS NO	Unit	RL	Regulatory Requirement	Result	Result	Result	
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo(e)pyrene	192-97-2	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[a]anthracene	56-55-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Chrysene	218-01-9	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	0.5	n.d.	n.d.	n.d.	

Abbreviation: n.d. = Not Detected (< Reporting Limit)
 RL = Reporting Limit
 NA = Not Applicable
 mg/kg = milligram per kilogram

Test Report No.: 0154078514a 006

Page 18 of 37

Remark:

- * Requirement according to European Directive 1907/2006/EC with Amendment No. 552/2009 EC Annex XVII Item No.: 50 and (EU) No.1272/2013 are summarized as below:

Scope	Parameter	Unit	Maximum permissible limit
Articles with direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use ,made of plastic and rubber shall follow below limit:			
Such articles include amongst others: ---sport equipment such as bicycles, golf clubs, racquets ---household utensils, trolleys, walking frames --- tools for domestic use --- clothing, footwear, gloves and sportswear ---watch-straps, wrist-bands, masks, head-bands	Each of 8 listed PAHs	mg/kg	1
Toys, including activity toys, and childcare articles	Each of 8 listed PAHs	mg/kg	0.5

Test Report No.: 0154078514a 006

Page 19 of 37

9. Polycyclic aromatic hydrocarbons (PAHs)
Test Method: ZEK 01.4-08

Test Result:

				Test No.	T001	T002	T003
				Material No.	Y01-L + Y03-L	Y04-L + Y05-L	Y06-L + Y07-L
Test Parameter	CAS NO	Unit	RL	Result	Result	Result	Result
Acenaphthene	83-32-9	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Acenaphthylene	208-96-8	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Anthracene	120-12-7	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[a]anthracene	56-55-3	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Benzo[e]pyrene	192-97-2	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Chrysene	218-01-9	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Fluoranthene	206-44-0	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Fluorene	86-73-7	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Naphthalene	91-20-3	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Phenanthrene	85-01-8	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Pyrene	129-00-0	mg/kg	0.2	n.d.	n.d.	n.d.	n.d.
Sum PAHs	NA	mg/kg	NA	n.d.	n.d.	n.d.	n.d.
Category*	NA	NA	NA	2	2	2	2
Limit of Benzo[a]pyrene(BaP)	50-32-8	mg/kg	NA	1	1	1	1
Limit of Sum PAHs	NA	mg/kg	NA	10	10	10	10

Test Report No.: 0154078514a 006

Page 20 of 37

				Test No.	T004	T005	T006
				Material No.	Y01-P + Y03-P	Y04-P + Y05-P	Y06-P + Y07-P
Test Parameter	CAS NO	Unit	RL	Result	Result	Result	
Acenaphthene	83-32-9	mg/kg	0.2	n.d.	n.d.	n.d.	
Acenaphthylene	208-96-8	mg/kg	0.2	n.d.	n.d.	n.d.	
Anthracene	120-12-7	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[a]anthracene	56-55-3	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2	n.d.	n.d.	n.d.	
Benzo[e]pyrene	192-97-2	mg/kg	0.2	n.d.	n.d.	n.d.	
Chrysene	218-01-9	mg/kg	0.2	n.d.	n.d.	n.d.	
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	n.d.	n.d.	n.d.	
Fluoranthene	206-44-0	mg/kg	0.2	n.d.	n.d.	n.d.	
Fluorene	86-73-7	mg/kg	0.2	n.d.	n.d.	n.d.	
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2	n.d.	n.d.	n.d.	
Naphthalene	91-20-3	mg/kg	0.2	0.3	0.2	0.5	
Phenanthrene	85-01-8	mg/kg	0.2	n.d.	n.d.	n.d.	
Pyrene	129-00-0	mg/kg	0.2	n.d.	n.d.	n.d.	
Sum PAHs	NA	mg/kg	NA	0.3	0.2	0.5	
Category*	NA	NA	NA	2	2	2	
Limit of Benzo[a]pyrene(BaP)	50-32-8	mg/kg	NA	1	1	1	
Limit of Sum PAHs	NA	mg/kg	NA	10	10	10	

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 NA = Not Applicable
 mg/kg = milligram per kilogram

Test Report No.: 0154078514a 006

Page 21 of 37

Remark:

- * Single components with an amount of <0.2 mg/kg were not considered by the calculation of the sum. In the case of all 18 PAHs according to ZEK 01.4-08 was not detected, the result is stated n.d.
- ** PAH maximum permissible limits requirement from the GS-Mark Approval

Parameter	Category 1	Category 2	Category 3
	Materials intended to be put into the mouth, or toy materials for children aged <36 months with intended skin contact	Materials, which is not falling into Cat. 1, with foreseeable skin contact longer than 30 seconds (long-term skin contact)	Materials, which is not falling into Cat. 1 or Cat. 2, with foreseeable skin contact up to 30 seconds (short-term skin contact)
Benzo(a)pyrene (mg/kg)	<0.2	1	20
Sum 18 PAH (ZEK 01.4-08) (mg/kg)	< 0.2	10	200

Limit: Specific evaluation required according to type of foreseeable use.

Test Report No.: 0154078514a 006

Page 22 of 37

10.Total Cadmium Content

Test Method: EN 1122:2001 (method B)

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	Y01-L + Y03-L + Y04-L	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.
T002	Y05-L + Y06-L + Y07-L	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.
T003	Y01-P + Y03-P + Y04-P	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.
T004	Y05-P + Y06-P + Y07-P	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Test Report No.: 0154078514a 006

Page 23 of 37

Remark:

*Regulations on Cadmium

EU	Legislation	Maximum Permissible Limit				
		Plastic materials	Paint (wet state)	Paint on the painted articles	Paint (high zinc content)	Metal parts of jewellery and imitation jewellery articles and hair accessories
EC	REACH regulation (EC) No. 1907/2006 Annex XVII Item 23 and its amendments (EC) No. 552/2009, (EU) No. 494/2011 and (EU) No. 835/2012	100mg/kg	N.D.	1000mg/kg	1000mg/kg	100mg/kg

Country	Legislation	Maximum Permissible Limit
		Paint, plastic, plating/ coating of surface treatment
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

Test Report No.: 0154078514a 006

Page 24 of 37

11. Phthalates (group)

Test Method: Organic solvent extraction, analyzed by GCMS

Test Result:

Test Parameter	CAS NO	Unit	RL	Customer's Requirement	Test No.	T001	T002	T003
					Material No.	Y01-L + Y03-L + Y04-L	Y05-L + Y06-L + Y07-L	Y01-P + Y03-P + Y04-P
Test Parameter	CAS NO	Unit	RL	Customer's Requirement	Result	Result	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Sum (DBP+BBP+DEHP)	-	%	NA	0.1	n.d.	n.d.	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	-	n.d.	n.d.	n.d.	n.d.
Sum (DINP+ DIDP+ DNOP)	-	%	NA	0.1	n.d.	n.d.	n.d.	n.d.
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
Diisopentyl phthalate (DiPP)	605-50-5	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
n-Pentyl-isopentyl phthalate	776297-69-9	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
Di(methoxyethyl) phthalate (DMEP)	117-82-8	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
1,2-Benzenedicarboxylic acid, di-C6-8 branched alkyl esters, C7-rich (DIHP)	71888-89-6	%	0.01	0.1	n.d.	n.d.	n.d.	n.d.
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl ester (DHNUP)	68515-42-4	%	0.01	0.1	n.d.	n.d.	n.d.	n.d.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	%	0.01	0.1	n.d.	n.d.	n.d.	n.d.
Dipentyl phthalate (DPP)	131-18-0	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.005	0.1	n.d.	n.d.	n.d.	n.d.
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	%	0.01	0.1	n.d.	n.d.	n.d.	n.d.

Test Report No.: 0154078514a 006

Page 25 of 37

					Test No.	T004
					Material No.	Y05-P + Y06-P + Y07-P
Test Parameter	CAS NO	Unit	RL	Customer's Requirement	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.	
Sum (DBP+BBP+DEHP)	-	%	NA	0.1	n.d.	
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	-	n.d.	
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	-	n.d.	
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	-	n.d.	
Sum (DINP+ DIDP+ DNOP)	-	%	NA	0.1	n.d.	
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	0.1	n.d.	
Diisopentyl phthalate (DiPP)	605-50-5	%	0.005	0.1	n.d.	
n-Pentyl-isopentyl phthalate	776297-69-9	%	0.005	0.1	n.d.	
Di(methoxyethyl) phthalate (DMEP)	117-82-8	%	0.005	0.1	n.d.	
1,2-Benzenedicarboxylic acid, di-C6-8 branched alkyl esters, C7-rich (DIHP)	71888-89-6	%	0.01	0.1	n.d.	
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl ester (DHNUP)	68515-42-4	%	0.01	0.1	n.d.	
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	%	0.01	0.1	n.d.	
Dipentyl phthalate (DPP)	131-18-0	%	0.005	0.1	n.d.	
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.005	0.1	n.d.	
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	%	0.01	0.1	n.d.	

Abbreviation: n.d. = Not Detected (< RL)
 RL = Reporting Limit
 NA = Not Applicable
 % = percentage

Test Report No.: 0154078514a 006

Page 26 of 37

12. Benzene, Toluene and Xylene content

Test Method: Organic solvent extraction, GCMS

Test Result:

Test No.	Material No.	Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Test Result
T001	Y01-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	28
		Xylene	1330-20-7	mg/kg	5	NA	n.d.
T002	Y03-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	16
		Xylene	1330-20-7	mg/kg	5	NA	n.d.
T003	Y04-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	n.d.
		Xylene	1330-20-7	mg/kg	5	NA	n.d.
T004	Y05-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	18
		Xylene	1330-20-7	mg/kg	5	NA	n.d.
T005	Y06-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	18
		Xylene	1330-20-7	mg/kg	5	NA	n.d.
T006	Y07-P	Benzene	71-43-2	mg/kg	5	5	n.d.
		Toluene	108-88-3	mg/kg	5	1000	14
		Xylene	1330-20-7	mg/kg	5	NA	n.d.

Test Report No.: 0154078514a 006

Page 27 of 37

Remark:

1. The requirement is following REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII (formerly known as 2005/59/EC).

Substances	Chemicals	Products	Maximum Permissible Limit
Item 5	Benzene	Toys or parts of toys	0.0005% (5mg/kg)
		As a constituent of other substances or in mixtures	< 0.1 % (<1000mg/kg)
Item 48	Toluene	Adhesives and spray paints	< 0.1 % (<1000mg/kg)

2. The requirement is following ChemVerbotsV, Anhang (zu § 1).

Substances	Chemicals	Products	Maximum Permissible Limit
Abschnitt 6	Benzene	Consumer Products	< 0.1 % (<1000mg/kg)
Abschnitt 30	Toluene	Adhesives and spray paints	< 0.1 % (<1000mg/kg)

Test Report No.: 0154078514a 006

Page 28 of 37

13. Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA)

Test Method: 1) Test portion is digested with acid and assisted with microwave, the elements are analysed by ICP-OES.
 2) Test portion is extracted by organic solvent, semi-quantitative analysis by GC-MS / UV-Vis
 3) Test portion is extracted by organic solvent, the extraction solution is analyzed by Headspace-GC/MS / LC-DAD-MS / LC-MS/MS.

Product Classification

With reference to Corrigendum to Regulation (EC) no.1907/2006 and ECHA, this product is classified as:

- Article
 Article with an integral substance/ mixture
 Combinations of an article (functioning as a container or a carrier material) and a substance/ mixture
 Substance/ mixture

Conclusion:

Conclusion			
Product Location	Acc. to authorisation list (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006), and candidate list by ECHA, the detected SVHC concentration is:	Obligation of Importer (*) (For article)	Detected Substance (if any)
Neon Highlighter Pencils	< 0.1%	Not necessary	--

(*) To communicate information down the supply chain according to article. 33 of REACH. **OR**

1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company.

2. Provide sufficient information to ensure safe use of the article and, as a minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.

Test Report No.: 0154078514a 006

Page 29 of 37

Test Result:

Test No.:	T001	T002
Material No.:	1+2+3+4+5+6	13+14+15+16+17+18
Result (%)	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< Reporting Limit)
RL = Reporting Limit
% = Percentage

Test Report No.: 0154078514a 006

Page 30 of 37

Remark:

- (*1) The reporting limit for each individual SVHC subject to authorisation according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006):

	Substances	CAS No.	Reporting Limit
1	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	0.01%
2	Benzylbutyl phthalate (BBP)	85-68-7	0.01%
3	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	0.01%
4	Dibutyl phthalate (DBP)	84-74-2	0.01%
5	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4/3194-55-6	0.01%
6	5-Tert-butyl-2,4,6-trinitro-m-xylene (Musk Xylene, MX)	81-15-2	0.01%
7	2,4-Dinitrotoluene (2,4-DNT)	121-14-2	0.01%
8	Diisobutyl phthalate (DIBP)	84-69-5	0.01%
9	Tris(2-chloroethyl)phosphate	115-96-8	0.01%
10	Diarsenic pentoxide(*3)	1303-28-2	0.01%
11	Diarsenic trioxide(*3)	1327-53-3	0.01%
12	Lead chromate(*3)(*4)	7758-97-6	0.01%
13	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (*3)(*4)	12656-85-8	0.01%
14	Lead sulfochromate yellow (C.I.Pigment Yellow 34) (*3)	1344-37-2	0.01%
15	Trichloroethylene	79-01-6	0.01%
16	Chromium trioxide(*4)	1333-82-0	0.01%
17	Acids generated from chromium trioxide and their oligomers: Chromic acid Dichromic acid Oligomers of chromic acid and dichromic acid(*4)	7738-94-5 13530-68-2	0.01%
18	Sodium dichromate, dihydrate (*3)	7789-12-0/10588-01-9	0.01%
19	Potassium dichromate(*4)	7778-50-9	0.01%
20	Ammonium dichromate(*4)	7789-09-5	0.01%
21	Potassium chromate(*4)	7789-00-6	0.01%
22	Sodium chromate(*4)	7775-11-3	0.01%
23	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*11)	25214-70-4	0.01%
24	1,2-Dichloroethane	107-06-2	0.01%
25	Bis(2-methoxyethyl) ether	111-96-6	0.01%
26	Arsenic acid (*3)	7778-39-4	0.01%
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	0.01%
28	Dichromium tris(chromate) (*4)	24613-89-6	0.01%
29	Strontium chromate (*4)	7789-06-2	0.01%
30	Potassium hydroxyoctaoxidizincatedi-chromate (*4)	11103-86-9	0.01%
31	Pentazinc chromate octahydroxide (*4)	49663-84-5	0.01%

(*2) The reporting limit for each individual SVHC in Candidate List by ECHA:

	Substances	CAS No.	Reporting Limit
32	Anthracene	120-12-7	0.01%
33	Bis(tributyltin)oxide (TBTO) (*3) (*5)	56-35-9	0.01%
34	Triethyl arsenate(*3)	15606-95-8	0.01%
35	Lead hydrogen arsenate(*3)	7784-40-9	0.01%
36	Cobalt(II) dichloride(*3)	7646-79-9	0.01%
37	Acrylamide	79-06-1	0.01%
38	Anthracene oil(*7)	90640-80-5	0.01%(*8)
39	Anthracene oil,anthracene paste,distn.lights(*7)	91995-17-4	
40	Anthracene oil, anthracene paste, anthracene fraction (*7)	91995-15-2	
41	Anthracene oil, anthracene-low(*7)	90640-82-7	
42	Anthracene oil, anthracene paste (*7)	90640-81-6	
43	Coal tar pitch, high temperature (*7)	65996-93-2	
44	Boric acid(*3) (*6)	10043-35-3 / 11113-50-1	0.01%
45	Disodium tetraborate, anhydrous(*3) (*6)	1330-43-4 / 12179-04-3 / 1303-96-4	0.01%
46	Tetraboron disodium heptaoxide, hydrate(*3) (*6)	12267-73-1	0.01%
47	2-Methoxyethanol	109-86-4	0.01%
48	2-Ethoxyethanol	110-80-5	0.01%
49	Cobalt(II) sulphate(*3)	10124-43-3	0.01%
50	Cobalt(II) dinitrate(*3)	10141-05-6	0.01%
51	Cobalt(II) carbonate(*3)	513-79-1	0.01%
52	Cobalt(II) diacetate(*3)	71-48-7	0.01%
53	Alkanes C10-C13, chloro (Short chain chlorinated paraffins) (SCCP)	85535-84-8	0.01%
54	2-Ethoxyethyl acetate	111-15-9	0.01%
55	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	0.01%
56	Hydrazine	7803-57-8 / 302-01-2	0.01%
57	1-Methyl-2-pyrrolidone	872-50-4	0.01%
58	1,2,3-Trichloropropane	96-18-4	0.01%
59	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters C7-rich (DIHP)	71888-89-6	0.01%
60	Aluminosilicate Refractory Ceramic Fibres (RCF) (*9)	-	0.01%
61	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) (*9)	-	0.01%
62	Bis(2-methoxyethyl) phthalate	117-82-8	0.01%
63	2-Methoxyaniline; o-Anisidine	90-04-0	0.01%
64	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.01%
65	Calcium arsenate (*3)	7778-44-1	0.01%
66	Trilead diarsenate (*3)	3687-31-8	0.01%
67	N,N-dimethylacetamide (DMAC)	127-19-5	0.01%
68	Phenolphthalein	77-09-8	0.01%
69	Lead dipicrate (*3)	6477-64-1	0.01%

Test Report No.: 0154078514a 006

Page 32 of 37

	Substances	CAS No.	Reporting Limit
70	Lead diazide, Lead azide (*3)	13424-46-9	0.01%
71	Lead styphnate (*3)	15245-44-0	0.01%
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.01%
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.01%
74	Diboron trioxide (*3) (*6)	1303-86-2	0.01%
75	Formamide	75-12-7	0.01%
76	Lead(II) bis(methanesulfonate) (*3)	17570-76-2	0.01%
77	1,3,5-tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	0.01%
78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone), MK	90-94-8	0.01%
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK	101-61-1	0.01%
81	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) (*10)	2580-56-5	0.01%
82	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) (*10)	548-62-9	
83	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol (*10)	561-41-1	
84	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) (*10)	6786-83-0	
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	0.01%
86	Pentacosaflluorotridecanoic acid	72629-94-8	0.01%
87	Tricosaflluorododecanoic acid	307-55-1	0.01%
88	Henicosaflluoroundecanoic acid	2058-94-8	0.01%
89	Heptacosaflluorotetradecanoic acid	376-06-7	0.01%
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO) <i>[covering well-defined substances and UVCB substances, polymers and homologues]</i>	-	0.01%
91	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCB) (*12)	123-77-3	0.05%
92	4-Nonylphenol, branched and linear <i>[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]</i>	-	0.01%
93	Hexahydro-2-benzofuran-1,3-dione (HHPA) Cis-cyclohexane-1,2-dicarboxylic anhydride Trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7 13149-00-3 14166-21-3	0.01%
94	Hexahydromethylphthalic anhydride (MHHPA) Hexahydro-4-methylphthalic anhydride Hexahydro-1-methylphthalic anhydride Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9	0.01%
95	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.01%
96	Diisopentylphthalate	605-50-5	
97	N-pentyl-isopentylphthalate	776297-69-9	
98	Methoxyacetic acid (MAA)	625-45-6	0.01%
99	N,N-dimethylformamide	68-12-2	0.01%
100	1,2-Diethoxyethane	629-14-1	0.01%
101	Diethyl sulphate	64-67-5	0.01%
102	Dimethyl sulphate	77-78-1	0.01%
103	N-methylacetamide	79-16-3	0.01%

Test Report No.: 0154078514a 006

Page 33 of 37

	Substances	CAS No.	Reporting Limit
104	1-bromopropane (n-propyl bromide)	106-94-5	0.01%
105	Furan	110-00-9	0.01%
106	Methyloxirane (Propylene oxide)	75-56-9	0.01%
107	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.01%
108	Dibutyltin dichloride (DBTC) (*3)	683-18-1	0.01%
109	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	0.01%
110	4,4'-methylenedi-o-toluidine	838-88-0	0.01%
111	4,4'-oxydianiline and its salts	101-80-4	0.01%
112	4-Aminoazobenzene	60-09-3	0.01%
113	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	0.01%
114	6-methoxy-m-toluidine (p-cresidine)	120-71-8	0.01%
115	Biphenyl-4-ylamine	92-67-1	0.01%
116	o-aminoazotoluene	97-56-3	0.01%
117	o-Toluidine; 2-	95-53-4	0.01%
118	Acetic acid, lead salt, basic (*3)	51404-69-4	0.01%
119	Trilead bis(carbonate)dihydroxide (*3)	1319-46-6	0.01%
120	Lead oxide sulfate (*3)	12036-76-9	0.01%
121	[Phthalato(2-)]dioxotrilead (*3)	69011-06-9	0.01%
122	Dioxobis(stearato)trilead (*3)	12578-12-0	0.01%
123	Fatty acids, C16-18, lead salts (*3)	91031-62-8	0.01%
124	Lead bis(tetrafluoroborate) (*3)	13814-96-5	0.01%
125	Lead cyanamidate (*3)	20837-86-9	0.01%
126	Lead dinitrate (*3)	10099-74-8	0.01%
127	Lead monoxide (Lead oxide) (*3)	1317-36-8	0.01%
128	Orange lead (Lead tetroxide) (*3)	1314-41-6	0.01%
129	Lead titanium trioxide (*3)	12060-00-3	0.01%
130	Lead Titanium Zirconium Oxide (*3)	12626-81-2	0.01%
131	Pyrochlore, antimony lead yellow (*3)	8012-00-8	0.01%
132	Pentalead tetraoxide sulphate (*3)	12065-90-6	0.01%
133	Silicic acid, barium salt (1:1), lead-doped (*3)	68784-75-8	0.01%
134	Silicic acid, lead salt (*3)	11120-22-2	0.01%
135	Sulfurous acid, lead salt, dibasic (*3)	62229-08-7	0.01%
136	Tetraethyllead (*3)	78-00-2	0.01%
137	Tetralead trioxide sulphate (*3)	12202-17-4	0.01%
138	Trilead dioxide phosphonate (*3)	12141-20-7	0.01%
139	Dipentyl phthalate (DPP)	131-18-0	0.01%
140	Ammonium pentadecafluorooctanoate (APFO) (*13)	3825-26-1	0.01%
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.01%
142	Cadmium (*3)	7440-43-9	0.01%
143	Cadmium oxide (*3)	1306-19-0	0.01%
144	4-Nonylphenol, branched and linear, ethoxylated (NPEO) [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	0.01%

Test Report No.: 0154078514a 006

Page 34 of 37

	Substances	CAS No.	Reporting Limit
145	Dihexyl phthalate	84-75-3	0.01%
146	Trixylyl phosphate	25155-23-1	0.01%
147	Imidazolidine-2-thione; 2-imidazoline-2-thiol (Ethylenethiourea)	96-45-7	0.01%
148	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.01%
149	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.01%
150	Lead di(acetate) (*3)	301-04-2	0.01%
151	Cadmium Sulphide (*3)	1306-23-6	0.01%
152	1,2-Benzenedicarboxylicacid, 1,2-dihexyl ester, branched and linear	68515-50-4	0.01%
153	Cadmium chloride (*3)	10108-64-2	0.01%
154	Sodium perborate; perboric acid, sodium salt (*3)	---	0.01%
155	Sodium peroxometaborate (*3)	7632-04-4	0.01%
156	Cadmium fluoride(*3)	7790-79-6	0.01%
157	Cadmium sulphate(*3)	10124-36-4; 31119-53-6	0.01%
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.01%
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.01%
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)(*14)	15571-58-1	0.01%
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)(*15)	---	0.01%

Test Report No.: 0154078514a 006

Page 35 of 37

Remarks:

- (*3) The substance is tested in terms of its respective elements (As, Pb, Co, B, Cd)
- (*4) The substance is tested in terms of Cr (VI)
- (*5) The substance is tested and calculated in terms of Tributyl tin.
- (*6) The substance is confirmed and tested in terms of Boric acid
- (*7) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.
- (*8) Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum.
- (*9) The test result is based on microscopic and chemical evaluation.
- (*10) The substance is quantified in terms of Michler's Ketone and Michler's Base by LC-MS, as Michler's Ketone or Michler's Base was found exceeds 0.01%
- (*11) The oligomer content is determined by Py-GC/MS.
- (*12) The content of diazene-1,2-dicarboxamide is analyzed in term of its breakdown product
- (*13) The substance is tested in terms of pentadecafluorooctanoate

Test Report No.: 0154078514a 006

Page 36 of 37

Concentration of Detected SVHC in Article

Article: Neon Highlighter Pencils

Weight of whole article (g): 55

Detected SVHCs	Concentration of detected SVHCs in an article (%)
--	<0.01%

Test Report No.: 0154078514a 006

Page 37 of 37

Sample Photo:



- END -