



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	1 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

Applicant:	Royal Brush Manufacturing, Inc.
Attention:	Michael C. Dovellos
Address:	515 West 45 th Street, Munster, IN 46321



SAMPLE INFORMATION			
Sample Description:	Craft paint 58 colors		
Style / Item No.:	/	Quantity:	3
Buyer:	NA	Color:	NA
Vendor:	NA	SKN/SKU NO.:	NA
Manufacturer:	NA	Age Grading:	NA
Country of Destination:	Europe	Country of Origin:	CHINA

TEST INFORMATION			
Sample Submitted by:	Applicable		
Sample Status:	Retest	Previous Report No.:	64318-050138
Date of Submission:	Jun 04, 2018		
Test Performance Dates:	Jun 04, 2018 – Jun 08, 2018		

EXECUTIVE SUMMARY
The submitted sample(s) MEET the following requirements requested by the client: - Migration of Certain Elements – EN 71-3:2013+A2:2017

For and on behalf of
Modern Testing Services Co., Ltd.

Gao Jian, David
Assistant Manager, Toy Division



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	2 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

COMPONENT BREAKDOWN LIST:

Test Item	Component Description
A	Craft paint 58 colors
#A1	Titanium white paint
#A2	Naples yellow paint
#A3	Orange paint
#A4	English rose paint
#A5	Purple paint
#A6	Lemon yellow paint
#A7	Flesh tint paint
#A8	Terracotta paint
#A9	Cramine paint
#A10	Rose paint
#A11	Pale yellow paint
#A12	Transparent yellow paint
#A13	Coral rose paint
#A14	Cochineal paint
#A15	Pale mauve paint
#A16	Almond paint
#A17	Indian yellow paint
#A18	Bright red paint
#A19	Scarlet paint
#A20	Light magenta paint
#A21	Sky blue paint
#A22	Pale blue paint
#A23	Violet paint
#A24	Taupe paint
#A25	Pthlalocyane green paint
#A26	Blue mist paint
A27	Cobalt blue paint
#A28	Ultramarine paint
#A29	Pthalocyanine blue paint
#A30	Deep green paint
#A31	Yellow green paint
#A32	Light green paint
#A33	Viridan paint
#A34	Light sap green paint
#A35	Fawn paint
#A36	Emerald green paint
#A37	Mid green paint

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108
Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	3 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

Test Item	Component Description
#A38	Chromium oxide green paint
#A39	Sap green paint
#A40	Olive green(blue) paint
#A41	Transparent yellow Oxide
#A42	Mars orange paint
#A43	Burnt sienna paint
#A44	Burnt umber paint
#A45	Gold grey paint
#A46	Yellow ochre
#A47	Light red paint
#A48	Violet dawn paint
#A49	Raw umber paint
A50	Grey paint
#A51	Reach blush paint
#A52	Transparent red oxide paint
#A53	Transparent brown paint
#A54	Carnation pink paint
#A55	Paynes grey paint
#A56	Prussians blue paint
#A57	Seashell pink paint
#A58	Black paint
#A59	Multicolor coating(on stick)
#A60	Paper with glue(stick)
#A61	White plastic(cap)
#A62	Transparent plastic(bottle)

Result(s) in this report was/were transferred from the specified tested item(s) of 64318-050318 dated on May 24, 2018.

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108
Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: infosh@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	4 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Migration of Certain Elements – EN 71-3:2013+A2:2017

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A1	#A2	#A3	#A4	#A5	#A6	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	346	353	26	27	965	46	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	104	89	<10	96	101	81	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	5 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A7	#A8	#A9	#A10	#A11	#A12	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	455	127	28	34	39	30	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	102	86	91	30	91	60	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	6 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A13	#A14	#A15	#A16	#A17	#A18	-
Mass of Trace Amount (mg)	NA	NA	87.6	NA	NA	NA	-
Aluminum (Al)	29	42	86	389	37	28	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	114	90	84	113	106	99	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	7 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A19	#A20	#A21	#A22	#A23	#A24	-
Mass of Trace Amount (mg)	NA	92.3	NA	NA	NA	NA	-
Aluminum (Al)	33	48	347	272	35	363	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	95	69	103	33	112	92	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	8 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A25	#A26	A27	#A28	#A29	#A30	-
Mass of Trace Amount (mg)	NA	NA	91.0	NA	NA	NA	-
Aluminum (Al)	43	404	106	50	31	34	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	96	112	98	91	91	80	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	<10	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	9 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A31	#A32	#A33	#A34	#A35	#A36	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	33	29	75	25	545	26	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	85	82	121	93	69	80	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	10 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A37	#A38	#A39	#A40	#A41	#A42	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	35	32	26	24	18	31	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	73	85	<10	63	<10	48	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	11 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A43	#A44	#A45	#A46	#A47	#A48	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	24	40	28	27	34	724	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	<10	<10	82	<10	75	109	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	12 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)						Migration Limit (mg/kg)
Test Item	#A49	A50	#A51	#A52	#A53	#A54	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	NA	NA	-
Aluminum (Al)	<10	126	34	32	20	362	1406
Antimony (Sb)	<1	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	<10	122	99	91	44	<10	375
Boron (B)	<100	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	<10	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	PASS	-

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	13 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category II: Liquid or sticky materials

Extractable Elements	Result (mg/kg)					Migration Limit (mg/kg)
Test Item	#A55	#A56	#A57	#A58	#A60	-
Mass of Trace Amount (mg)	NA	NA	NA	NA	34.5	-
Aluminum (Al)	45	27	32	24	34	1406
Antimony (Sb)	<1	<1	<1	<1	<1	11.3
Arsenic (As)	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
Barium (Ba)	86	137	99	118	<10	375
Boron (B)	<100	<100	<100	<100	<100	300
Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Chromium (III) (Cr III)	<1	<1	<1	<1	<1	9.4
Chromium (VI) (Cr VI)	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Cobalt (Co)	<1	<1	<1	<1	<1	2.6
Copper (Cu)	<10	<10	<10	<10	<10	156
Lead (Pb)	<1	<1	<1	<1	<1	3.4
Manganese (Mn)	<10	<10	<10	<10	<10	300
Mercury (Hg)	<1	<1	<1	<1	<1	1.9
Nickel (Ni)	<1	<1	<1	<1	<1	18.8
Selenium (Se)	<1	<1	<1	<1	<1	9.4
Strontium (Sr)	80	80	80	80	80	1125
Tin (Sn)	<0.8	<0.8	<0.8	<0.8	<0.8	3750
Organic Tin	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn)	<10	<10	<10	<10	<10	938
Conclusion	PASS	PASS	PASS	PASS	PASS	-

Method: EN 71-3:2013+A2:2017. The heavy metals content was determined by Inductively Coupled Plasma Mass Spectrophotometer (ICP-MS). The content of Chromium (VI) was determined by Ion Chromatography Ultraviolet - Visible Spectrometer (IC-UV Vis). The content of Chromium (III) was determined by calculation. Organic tin content was determined according to Annex G of EN 71-3:2013+A2:2017 with analysis by Gas Chromatography Mass Spectrometer.

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108
Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: infosh@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	14 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Category III: Scraped-off materials

Extractable Elements	Result (mg/kg)			Migration Limit (mg/kg)
Test Item	#A59	#A61	#A62	-
Mass of Trace Amount (mg)	20.2	68.1	69.3	-
Aluminum (Al)	<10	<10	<10	70000
Antimony (Sb)	<10	<10	<10	560
Arsenic (As)	<10	<10	<10	47
Barium (Ba)	<10	<10	<10	18750
Boron (B)	<100	<100	<100	15000
Cadmium (Cd)	<5	<5	<5	17
Chromium (III) (Cr III)	<10	<10	<10	460
Chromium (VI) (Cr VI)	<0.15	<0.15	<0.15	0.2
Cobalt (Co)	<10	<10	<10	130
Copper (Cu)	<10	<10	<10	7700
Lead (Pb)	<10	<10	<10	160
Manganese (Mn)	<10	<10	<10	15000
Mercury (Hg)	<10	<10	<10	94
Nickel (Ni)	<10	<10	<10	930
Selenium (Se)	<10	<10	<10	460
Strontium (Sr)	<10	<10	<10	56000
Tin (Sn)	<0.8	<0.8	<0.8	180000
Organic Tin	<3	<3	<3	12
Zinc (Zn)	<10	<10	<10	46000
Conclusion	PASS	PASS	PASS	-

Method: EN 71-3:2013+A2:2017. The heavy metals content was determined by Inductively Coupled Plasma Mass Spectrophotometer (ICP-MS).

For samples of migrated chromium content lower than migration limit of Chromium (VI), no speciation test for Chromium (III) and chromium (VI) were conducted. The results were derived from that of total chromium.

For samples of migrated tin content calculated as tributyl tin lower than migration limit of organic tin, no organic tin test was conducted. The results were derived from that of Tin.

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108

Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam



Report No:	64318-060053
Date:	Jun 08, 2018
Page:	15 of 15
Lab Location:	SHANG HAI

Royal Brush Test Report

TEST SUMMARY:

Remark: 1. The material categories of tested item(s) are classified as below per clause 4.1 of this standard.

Category I: Dry, brittle, power like or pliable materials
Compressed paint tablets, materials intended to leave a trace or similar materials in solid form appearing as such in the toy (e.g. the cores of colouring pencils, chalk, crayons)
Pliable modelling materials, including modelling clays and plaster
Category II: Liquid or sticky materials
Liquid paints, including finger paints, varnishes, lacquers, liquid ink in pens and similar materials in liquid form appearing as such in the toy (e.g. slimes, bubble solution)
Glue sticks
Category III: Scraped-off materials
Coatings of paints, varnishes, lacquers, printing inks, polymers, foams and similar coatings
Polymeric and similar materials, including laminates, whether textile reinforced or not, but excluding other textiles
Paper and paper board
Textiles, whether natural or synthetic
Glass, ceramic, metallic materials
Other materials whether mass coloured or not (e.g. wood, fibre board, hard board, bone and leather)

- Result(s) of organic tin reported was / were the sum of Methyltin (MeT), Butyltin (BuT), Dibutyltin (DBT), Tributyltin (TBT), Tetraethyltin (TeBT), Monoethyltin (MOT), Di-n-octyltin (DOT), Di-n-propyltin (DProT), Diphenyltin (DPHT) and Triphenyltin (TPHT) expressed as TBT.
- The accessibility of the submitted sample is verified according to EN71-1 before and after abuse.
- The received sample(s) contained component(s) of less than 10mg on one single sample, therefore such component(s) was not tested for extractable heavy metals content as specified in clause 7.1 of this standard.

Note: mg/kg = milligram per kilogram
mg = milligram
“<” = less than
NA = Not applicable

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

NOTE:

If there is question or concern regarding the above results, please contact us via email iyang@mts-global.com

This test report is governed by the Terms and Conditions, available on request or accessible at <http://www.mts-global.com/en/terms.html>. Attention is especially drawn to the limitations of liability, indemnification and jurisdictional provisions defined therein. This report is issued strictly based on the testing of the samples submitted by you. The test results in this report refer only to the sample(s) actually tested and do not refer or be deemed to refer to any bulk production from which such sample(s) may be said to have been obtained. In the event that MTS was requested to survey and test any bulk production quantity of samples, MTS, in the absence of any contrary written instructions, performed random sampling of bulk production for testing purposes. Variations in the conditions under which samples are stored, transported, etc., may lead to variations in the test results. MTS cannot anticipate and shall not be held responsible for variations in test results that may be due to factors beyond MTS' control, such as, sample cross-contamination, evaporation of volatile substances due to storage temperature, humidity, etc. This report does not constitute a recommendation, actual or implied, for any specific course of action. Other than the expressed warranties made in the Terms and Conditions of the MTS Test Request Form, MTS makes no warranties or representations either express or implied with respect to this report. In no circumstances whatsoever shall MTS be liable for any consequential, special or incidental damages arising out of, or in connection with, this report.

Modern Testing Services Co., Ltd.

No. 105 Guangzhong Rd., Zhuangqiao Town, Minhang, Shanghai, China P.R.C.201108
Tel: (86) 21-23509600 Fax: (86) 21-23509700 Email: info@mts-global.com Website : www.mts-global.com

USA • Germany • UK • China • Hong Kong • Taiwan • India • Thailand • Korea • Indonesia • Australia • Turkey • Cambodia • Bangladesh • Pakistan • Vietnam