

Test Report

Number : TWNC00549752

Applicant: Taiwan Additive Chemical Co., Ltd.
1F., No.146, Minzu Rd., Linkou Dist.,
New Taipei City 24462, Taiwan

Date : Oct 03, 2016

Sample Description:

One (1) piece of submitted sample said to be :
Item Name : Silicone Ink
Item No. : LT-Color 8D(104, 106, 111, 122, 127, 135)
Quantity : 1 Piece
Country of Origin : Taiwan
Date Sample Received : Sep 19, 2016
Date Test Started : Sep 20, 2016

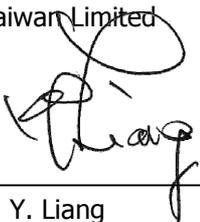
Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Conclusion:

<u>Tested Samples</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	As Per Applicant's Provided Requirement	
	– Sum of NP and OP	Pass
	– Sum of NP, OP, NPEO, and OPEO	Pass
	– Azo Dyes	Pass
	– Disperse Dyess (Carcinogenic, Allergenic, and Other Dyes)	Pass
	– Formaldehyde Content	Pass
	– Total Cadmium (Cd) Content In Surface Coating	Pass
	– Total Lead (Pb) Content In Surface Coating	Pass
	– Total Mercury (Hg) Content	Pass
	– Phthalates	Pass

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited



K. Y. Liang
Director





Number : TWNC00549752

Test Conducted :

1. Alkylphenol and Alkylphenol Ethoxylates (NP, OP, NPEO, and OPEO) Content

By solvent extraction and Liquid Chromatography /Tandem Mass Spectrometer (LC-MS-MS) and Liquid Chromatography-Mass Spectrometer (LC-MS) analysis.

<u>Compound</u>	<u>Result (ppm)</u> <u>Black Silicone Ink</u>	<u>Limit# (ppm)</u>
Nonylphenol (NP)	ND	--
Octylphenol (OP)	ND	--
Nonylphenol Ethoxylates (NPEO)	ND	--
Octylphenol Ethoxylates (OPEO)	ND	--
Sum of NP and OP	ND	10
Sum of NP, OP, NPEO, and OPEO	ND	250

Remarks: ppm = Parts per million = mg/kg
ND = Not detected
Detection limit = NP, OP: 10 ppm
 NPEO, OPEO: 50 ppm
= As per applicant's provided requirement





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Test Conducted :

2. Azo Dyes

By Gas Chromatography-Mass Spectrometer (GC-MS) analysis.

Test Method : Textile Method (EN 14362-1 : 2012)

	<u>Forbidden</u>	<u>CAS No.</u>	<u>Result</u> <u>Black Silicone Ink</u>
1.	o-Toluidine	95-53-4	N
2.	2,4-Xylidine	95-68-1	N
3.	2,6-Xylidine	87-62-7	N
4.	o-Anisidine	90-04-0	N
5.	p-Chloroaniline	106-47-8	N
6.	p-Cresidine	120-71-8	N
7.	2,4,5-Trimethylaniline	137-17-7	N
8.	4-Chloro-o-Toluidine	95-69-2	N
9.	2,4-Tolulenediamine	95-80-7	N
10.	2,4-Diaminoaniso	615-05-4	N
11.	2-Naphthylamine	91-59-8	N
12.	2-Amino-4-nitrotoluene	99-55-8	N
13.	4-Aminoazobenzene	60-09-3	N
14.	4-Aminodiphenyl	92-67-1	N
15.	4,4'-Oxydianiline	101-80-4	N
16.	Benzidine	92-87-5	N
17.	4,4'-Diaminodiphenylmethane	101-77-9	N
18.	o-Aminoazotoluene	97-56-3	N
19.	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	N
20.	3,3'-Dimethylbenzidine	119-93-7	N
21.	4,4'-Thiodianiline	139-65-1	N
22.	3,3'-Dichlorobenzidine	91-94-1	N
23.	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	N
24.	3,3'-Dimethoxybenzidine	119-90-4	N

Limit#: 20 ppm

Remarks : N = Not detected
Detection limit = 5 ppm
ppm = Parts per million = mg/kg
= As per applicant's provided requirement



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Number : TWNC00549752

Test Conducted :

3. Disperse Dyes (Carcinogenic, Allergenic, and Other Dyes)

As per DIN 54231, by Liquid Chromatography /Tandem Mass Spectrometer (LC-MS-MS) analysis.

<u>Compound</u>	<u>Result (mg/l In Extract)</u>
	<u>Black Silicone Ink</u>
Acid Red 26	ND
Basic Red 9	ND
Basic Violet 14	ND
Direct Black 38	ND
Direct Blue 6	ND
Direct Red 28	ND
Disperse Blue 1	ND
Disperse Blue 3	ND
Disperse Blue 7	ND
Disperse Blue 26	ND
Disperse Blue 35	ND
Disperse Blue 102	ND
Disperse Blue 106	ND
Disperse Blue 124	ND
Disperse Brown 1	ND
Disperse Orange 1	ND
Disperse Orange 3	ND
Disperse Orange 11	ND
Disperse Orange 37/59/76	ND
Disperse Orange 149	ND
Disperse Red 1	ND
Disperse Red 11	ND
Disperse Red 17	ND
Disperse Yellow 1	ND
Disperse Yellow 3	ND
Disperse Yellow 9	ND
Disperse Yellow 23	ND
Disperse Yellow 39	ND
Disperse Yellow 49	ND

Limit# : 5 mg/l in extract

Remarks : mg/l = Milligram per liter
Reporting limit = 1 mg/l in extract
ND = Not detected
= As per applicant's provided requirement



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Test Conducted :

4. Formaldehyde Content

As per ISO 14184-1 (for textile) or ISO 17226-2 (for leather) or GB 18583 (For painting/coating), by UV-Vis Spectrophotometer (UV-VIS) analysis.

<u>Tested Sample</u>	<u>Result (ppm)</u>
Black Silicone Ink	ND

Limit#: 16 ppm (For Infant and children less than 36 months)
75 ppm (For Adult and children greater than 36 months)

Remarks : ppm = Parts per million = mg/kg
ND = Not Detected
Detection Limit = 16 ppm
= As per applicant's provided requirement

5. Total Cadmium (Cd) and Total Lead (Pb) Content In Surface Coating

According to CPSIA Test Method: CPSC-CH-E1003-09.1, by microwave digestion and Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES) analysis.

<u>Compound</u>	<u>Result (ppm)</u>	<u>Limit# (ppm)</u>
	<u>Black Silicone Ink</u>	
Total Cadmium (Cd)	ND	50
Total Lead (Pb)	ND	90

Remarks: ppm = Parts per million = mg/kg
ND = Not detected
Detection limit = 5 ppm
= As per applicant's provided requirement





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Test Conducted :

6. Total Mercury (Hg) Content

By microwave digestion method and by Inductively Coupled Plasma-Mass Spectrometer (ICP-MS) analysis.

<u>Tested Sample</u>	<u>Result (ppm)</u>	<u>Limit# (ppm)</u>
Black Silicone Ink	ND	1

Remarks : ppm = Parts per million = mg/kg
ND = Not detected
Reporting limit = 0.1 ppm
= As per applicant's provided requirement

7. Phthalates

According to CPSIA Test Method: CPSC-CH-C1001-09.3, by solvent extraction and Gas Chromatography-Mass Spectrometer (GC-MS) analysis.

<u>Compound</u>	<u>Result (ppm)</u>	<u>Limit# (ppm)</u>
	<u>Black Silicone Ink</u>	
Di-n-butyl phthalate (DBP)	ND	--
Butyl benzyl phthalate (BBP)	ND	--
Di-2-ethylhexyl phthalate (DEHP)	ND	--
Di-n-octyl phthalate (DNOP)	ND	--
Di-iso-decyl Phthalate (DIDP)	ND	--
Di-iso-nonyl Phthalate (DINP)	ND	--
Di-iso-butyl phthalate (DIBP)	ND	--
Di-n-hexyl phthalate(DnHP)	ND	--
Dimethyl phthalate (DMP)	ND	--
Diethyl phthalate (DEP)	ND	--
Sum of above 10 phthalates	ND	1000

Remarks: ppm = Parts per million = mg/kg
ND = Not detected
Detection limit = 50 ppm
= As per applicant's provided requirement





End of Report

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