

Test Report

Report No. SHR10062181151011

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Applicant :Zhejiang Rectron Electronic Co.,Ltd

Address :28# Lizheng Road, Jiashan Economic Development Zone Zhejiang, P.R.China

Report on the submitted sample(s) said to be:

Sample information :Please see the following page

Make use of the following package material :SMA(L) / SMB(L) /SMC(L) / SMX / SlimPAQ (P) / SOD123 / SOD123F(L) / MELF / MINI MELF / R1 / A405 / DO41 / DO15 / R3 / R6 / R7 / 1.5KE / DO201 / DO204 / HVM / HVP / DBS / DB / DBLS / SLDBS / MDS / MD / BDB / RS1 / RS2(L) / RS4L / RS6 / RS8 / RB15 / WOM / RC2 / BR3 / BR6 / BR8 / BR10 / BR15(W)-25(W)-35(W) / MB15(W)-25(W)-35(W) / MP15(W)-25(W)-35(W)/ RS1M-2M-4M-6M-8M-10M-15M-20M-25M-35M/ RBU4M-6M-8M-10M-15M / (I)TO220A / (I)TO220 / DPAK/ D2PAK / TO247 / SOT23 /

Buyer :SONY

Supplier :Rectron Ltd

Manufacturer :Rectron Ltd

Sample Received Date :Jun.21,2010

Testing Period :Jun.21,2010 to Jun.25,2010


Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

Summary According to the analytical results, concentrations of 30 SVHC substances are less than 0.1% in the submitted sample

Test Requested: Please refer to the following pages.

Tested by



SH03
报告专用章
Technical Manager

Approved by

Inspected by

Zhong Yijun

Date

Jun.25,2010

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Test Requested

As specified by client, to screen the thirty substances of very high concern (SVHC) under Regulation(EC) No 1907/2006 of REACH, including: Anthracene; 4,4'-Diaminodiphenylmethane; Dibutyl phthalate; Cobaltdichloride; Diarsenic pentaoxide; Diarsenic trioxide; Sodium dichromate; Musk-xylene; Bis(2-ethyl(hexyl) phthalate) (DEHP); Hexabromocyclododecane (HBCDD); Short Chain Chlorinated Paraffins; Bis(tributyltin)oxide; Lead hydrogen arsenate; Benzyl butyl phthalate; Triethyl Arsenate; Anthracene oil; four types of Anthracene oil fractions; Coal tar pitch, high temperature; Aluminosilicate, Refractory Ceramic Fibres; Zirconia Aluminosilicate, Refractory Ceramic Fibres; 2,4-Dinitrotoluene ; Diisobutyl phthalate (DIBP); Lead chromate ; Lead chromate molybdate sulphate red (C.I. Pigment Red 104); Lead sulfochromate yellow(C.I. Pigment Yellow 34); Tris(2-chloroethyl)phosphate (TCEP), Acrylamide in the submitted sample.

Sample information

No.	Sample name	Part No.	Sample Description	Material
1	Lead Wire	-	Copper-colored metal	Cu
	Solder Wafer	-	Silver-grey metal	Pb、 Sn、 Ag
	Dice Wafer	-	Chip	Si
	Plating	-	Silvery metal	Tin
2.1	黑胶(有卤素)	EME-1200	Grey solid	Non-metal
2.2	Silicon Rubber	-	White silicone rubber	Si

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Test Method

No.	Substance Name(s)	Test Method and Equipments	Substance Classification	Report Limit
1	Anthracene	Refer to US EPA 3550C:2007& US EPA 8270D:2007, GC-MS	PBT	0.005%
2	4,4'- Diaminodiphenylmethane	Refer to US EPA 8270D:2007, GC-MS	Carcinogen, cat. 2	0.005%
3	Dibutyl phthalate(DBP)	Refer to ASTM D3421:1975, GC-MS	Toxic for reproduction, cat.2	0.005%
4	Cobalt dichloride*	Refer to US EPA 3052:1996/ BS EN14582:2007, ICP-OES/IC	Carcinogen, cat.2	0.01%
5	Diarsenic pentaoxide*	Refer to US EPA 3052:1996, ICP-OES	Carcinogen, cat.1	0.01%
6	Diarsenic trioxide*	Refer to US EPA 3052:1996, ICP-OES	Carcinogen, cat.1	0.01%
7	Sodium dichromate*	Refer to US EPA 3052:1996/ US EPA3060A:1996, ICP-OES/UV-Vis	Carcinogen, cat.2; Mutagen, cat.2; Toxic for reproduction, cat.2	0.01%
8	Musk xylene	Refer to US EPA 3540C:1996, GC-MS	vPvB	0.005%
9	Bis(2-ethyl(hexyl)phthalate) (DEHP)	Refer to ASTM D3421:1975, GC-MS	Toxic for reproduction, cat.2	0.005%
10	Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996, GC-MS	PBT	0.005%
11	Short Chain Chlorinated Paraffins(SCCPs)	Refer to US EPA 3540C:1996, GC-MS	PBT; vPvB	0.01%
12	Bis(tributyltin)oxide (TBTO)*	Refer to ISO 17353:2004 ICP-OES/GC-MS	PBT	0.005%
13	Lead hydrogen arsenate*	Refer to US EPA 3052:1996, ICP-OES	Carcinogen, cat.1; Toxic for reproduction, cat.1	0.01%
14	Benzyl butyl phthalate(BBP)	Refer to ASTM D3421:1975, GC-MS	Toxic for reproduction, cat.2	0.005%
15	Triethyl arsenate*	Refer to US EPA 3052:1996, ICP-OES	Carcinogen, cat.1	0.01%

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Test Method

No.	Substance Name(s)	Test Method and Equipments	Substance Classification	Report Limit
16	^① Anthracene oil	In-house method, GC-MS	PBT	0.05%
17	^① Anthracene oil, anthracene paste, distn. Lights *	In-house method, GC-MS	PBT	0.05%
18	^① Anthracene oil, anthracene paste, anthracene fraction	In-house method, GC-MS	PBT	0.05%
19	^① Anthracene oil, anthracene-low	In-house method, GC-MS	PBT	0.05%
20	^① Anthracene oil, anthracene paste	In-house method, GC-MS	PBT	0.05%
21	^① Coal tar pitch, high temperature	In-house method, GC-MS	PBT; Carcinogen, cat.2	0.05%
22	^② Aluminosilicate, Refractory Ceramic Fibres	In-house method, ICP-OES/SEM-EDS	Carcinogen, cat.2	0.05%
23	^② Zirconia Aluminosilicate, Refractory Ceramic Fibres	In-house method, ICP-OES/SEM-EDS	Carcinogen, cat.2	0.05%
24	2,4-Dinitrotoluene	In-house method, GC-MS	Carcinogen, cat.2	0.01%
25	Diisobutyl phthalate (DIBP)	Refer to ASTM D 3421:1975, GC-MS	Toxic for reproduction, cat.2	0.005%
26	^② Lead chromate	Refer to US EPA 3052:1996/ US EPA 3060A:1996, ICP-OES/UV-Vis	Carcinogen, cat.2; Toxic for reproduction, cat.1	0.05%
27	^② Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	Refer to US EPA 3052:1996/ US EPA 3060A:1996, ICP-OES/UV-Vis	Carcinogen, cat.2; Toxic for reproduction, cat.1	0.05%
28	^② Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	Refer to US EPA 3052:1996/ US EPA 3060A:1996, ICP-OES/UV-Vis	Carcinogen, cat.2; Toxic for reproduction, cat.1	0.05%
29	Tris(2-chloroethyl)phosphate (TCEP)	In-house method, GC-MS	Toxic for reproduction, cat.2	0.01%
30	Acrylamide	In-house method, HPLC	Carcinogen, cat.2; Mutagen, cat.2	0.01%

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Test Results

No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	
				1	2
1	Anthracene	120-12-7	204-371-1	/	N.D.
2	4,4' - Diaminodiphenylmethane	101-77-9	202-974-4	/	N.D.
3	Dibutyl phthalate(DBP)	84-74-2	201-557-4	/	N.D.
4	Cobalt dichloride*	7646-79-9	231-589-4	N.D.	N.D.
5	Diarsenic pentaoxide*	1303-28-2	215-116-9	N.D.	N.D.
6	Diarsenic trioxide*	1327-53-3	215-481-4	N.D.	N.D.
7	Sodium dichromate*	7789-12-0/ 10588-01-9	234-190-3	N.D.	N.D.
8	Musk xylene	81-15-2	201-329-4	/	N.D.
9	Bis(2-ethyl(hexyl) phthalate) (DEHP)	117-81-7	204-211-0	/	N.D.
10	Hexabromocyclododecane (HBCDD)	25637-99-4/ 3194-55-6	247-148-4/ 221-695-9	/	N.D.
11	Short Chain Chlorinated Paraffins(SCCPs)	85535-84-8	287-476-5	/	N.D.
12	Bis(tributyltin)oxide (TBTO)*	56-35-9	200-268-0	/	N.D.
13	Lead hydrogen arsenate*	7784-40-9	232-064-2	N.D.	N.D.
14	Benzyl butyl phthalate(BBP)	85-68-7	201-622-7	/	N.D.
15	Triethyl arsenate*	15606-95-8	427-700-2	N.D.	N.D.
16	^① Anthracene oil	90640-80-5	292-602-7	/	N.D.
17	^① Anthracene oil,anthracene paste, distn. Lights ****	91995-17-4	295-278-5	/	N.D.
18	^① Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	/	N.D.
19	^① Anthracene oil, anthracene-low	90640-82-7	292-604-8	/	N.D.
20	^① Anthracene oil, anthracene paste	90640-81-6	292-603-2	/	N.D.
21	^① Coal tar pitch, high temperature	659969-93-2	266-028-2	/	N.D.
22	^② Aluminosilicate, Refractory Ceramic Fibres	-	650-017-00-8**	N.D.	N.D.
23	^② Zirconia Aluminosilicate, Refractory Ceramic Fibres	-	650-017-00-8**	N.D.	N.D.
24	2,4-Dinitrotoluene	121-14-2	204-450-0	/	N.D.
25	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	/	N.D.
26	^② Lead chromate	7758-97-6	231-846-0	N.D.	N.D.
27	^② Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	N.D.	N.D.

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No.	Tested Item(s)	CAS No.	EC No.	Concentration (%)	
				1	2
28	[Ⓜ] Lead sulfochromate yellow (C.I. Pigment Yellow 34) ^{***}	1344-37-2	215-693-7	N.D.	N.D.
29	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	204-118-5	/	N.D.
30	Acrylamide	79-06-1	201-173-7	/	N.D.

Note

-N.D. = Not Detected (<report limit)

-0.1%= 1000 mg/kg =1000 ppm

- PBT=Persistent, bioaccumulative and toxic; vPvB=very Persistent very Bioaccumulative

*Concentration value of Cobalt dichloride by the conversion from the test results of Cobalt and Chlorine. Concentration value of Diarsenic pentaoxide, Diarsenic trioxide, Sodium dichromate, Lead hydrogen arsenate, Triethyl arsenate by the conversion from the test results of corresponding heavy metal.

-**:All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labeling and Packaging of chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).

-***: C.I.: Colour Index

-****:Light fractions from distillation

-^①:In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.

-^②:In view of the substance contain variable substances, the test results are calculated based on main constituents of the representative compounds for the substances, and the test results of the representative compounds are calculated based on the result of specified heavy metal elements.

Remarks

1:As the concentration of above substance that identified is based on the worst case scenario.

Further investigation is required for confirmation of the presence of the substance in the sample.

2:The report limit is evaluated based on the representative substances.

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Appendix

1. According to the Article 33 of the Regulation (EC) No 1907/2006 (REACH)-Duty to communicate information on substances in articles.

—Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1 % weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

—On request by a consumer any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1 % weight by weight (w/w) shall provide the consumer with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance. The relevant information shall be provided, free of charge, within 45 days of receipt of the request.

2. According to the Article 33 of the Regulation (EC) No 1907/2006 (REACH)- Notification of the Substance in Article.

—If a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1), EU and EEA producers or importers of articles have to notify ECHA when their article contains a substance on the Candidate List. This obligation applies if the substance is present above 0.1% (w/w) and its quantities in the produced/imported articles are above 1 tonne in total per year.

3. According to the other articles of the Regulation (EC) No 1907/2006 (REACH), The relevant obligation for the substance on its own or in preparation.

—OBLIGATIONS: SUBSTANCES

From 28 October 2008, EU & EEA suppliers of a substance have to provide a safety data sheet to their customers when the substance is on the Candidate List.

—OBLIGATIONS: PREPARATIONS

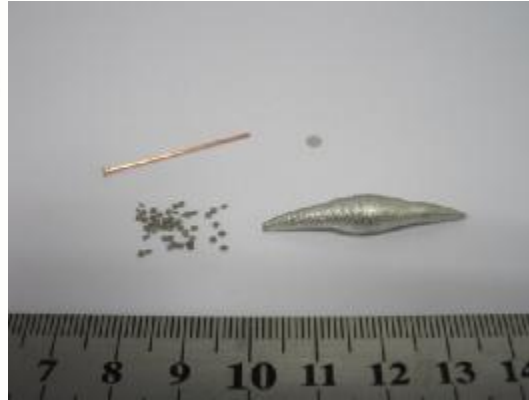
From 28 October 2008, EU and EEA suppliers of a preparation not classified as dangerous according to Directive 1999/45/EC have to provide the recipients, at their request, with a safety data sheet if the preparation contains at least one substance on the Candidate List and its individual concentration is at least 0.1% (w/w) for non gaseous preparations and at least 0.2% by volume for gaseous preparations.

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Photo(s) of the sample(s)



1



2.1



2.2

*** End of report ***

This report is considered invalidated without the Special Seal for Inspection of the CTI, This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of CTI, this test report shall not be copied except in full and published as advertisement.

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