



**BUREAU
VERITAS**

TEST REPORT

LAB NO. : (8815)335-0058
DATE : Dec 14, 2015
PAGE : 1 OF 13

APPLICANT : **INNOKIN TECHNOLOGY CO., LTD**
BUILDING 6, XINXINTIAN INDUSTRIAL PARK, XINSHA
ROAD, SHAJING, BAOAN DISTRICT, SHENZHEN, CHINA

DATE OF SUBMISSION : Dec 1, 2015

TEST PERIOD : Dec 1, 2015 to Dec 14, 2015

SAMPLE DESCRIPTION : COOL FIRE IV PLUS

Style No. : COOL FIRE IV PLUS

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	-

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

Harvey Xue
Assistant Manager, Analytical Lab

RT/BH

REMARK

If there are questions or concerns on this report, please contact the following persons:

Report Enquiry: (86) 0769 85935656 Ext. 8819 CPSAnalytical.DG@cn.bureauveritas.com




Business Contact: (86) 0769 85893595


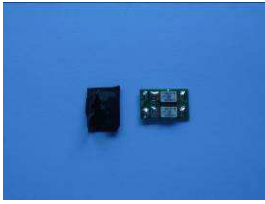
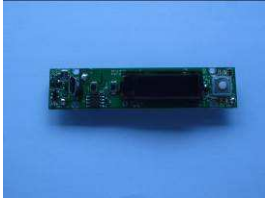
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Photo of the Submitted Sample


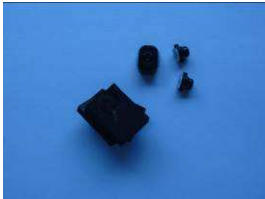






Test Item Description And Photo List

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)	
001		Red plated silvery metal	Housing, cool fire IV plus	-	
002		Black plated silvery metal	Label, housing, cool fire IV plus	-	
003		Beige glue	Glue, housing, cool fire IV plus	-	
004		Black printed white paper	Bar code, housing, cool fire IV plus	-	
005		Black plastic	Film, housing, cool fire IV plus	-	
006		Black plated silvery metal	Frame, housing, cool fire IV plus	-	
007		Black plated silvery metal	Frame, housing, cool fire IV plus	-	
008		Golden metal	Pin, plug, frame, housing, cool fire IV plus	-	
009		Brown plastic	Pin holder, plug, frame, housing, cool fire IV plus	-	
010		Silvery metal	Plug, frame, housing, cool fire IV plus	-	
011		Silvery metal	Spring, plug, frame, housing, cool fire IV plus	-	
012		White plastic	Washer, spring, plug, frame, housing, cool fire IV plus	-	
013		Golden metal	Contact plate, plug, frame, housing, cool fire IV plus	-	
014		Silvery solder	Solder, plug, frame, housing, cool fire IV plus	-	
015		Black coated light grey plastic	Display screen, frame, housing, cool fire IV plus	-	
016		Transparent plastic	Film, display screen, frame, housing, cool fire IV plus	-	
017			Black soft plastic	Wire insulation, PCB, cool fire IV plus	-
018			Grey printed red soft plastic	Wire insulation, PCB, cool fire IV plus	-
019	Silvery plated coppery metal		Wire, PCB, cool fire IV plus	-	

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
020		Black plated silvery metal	Screw, cool fire IV plus	-
021		Silvery metal	Long screw, cool fire IV plus	-
022		Silvery metal	Short screw, cool fire IV plus	-
023		Black soft plastic	Sleeve, small PCB, cool fire IV plus	-
024		Black printed white body	EC, small PCB, cool fire IV plus	-
025		Coppery metal	Pin, EC, small PCB, cool fire IV plus	-
026		Silvery solder	Solder, small PCB, cool fire IV plus	-
027		Green coated brown plastic with coppery metal	Small PCB, cool fire IV plus	-
028		Grey/transparent plastic	Diaphragm, display screen, PCB, cool fire IV plus	-
029		Silver/transparent glass	Display screen, PCB, cool fire IV plus	-
030		Grey/transparent plastic	Holder, display screen, PCB, cool fire IV plus	-
031		Brown soft plastic with silvery metal	Data wire, display screen, PCB, cool fire IV plus	-
032		Black plastic	Sticker, display screen, PCB, cool fire IV plus	-
033		White soft plastic	Sleeve, switch, PCB, cool fire IV plus	-
034		White soft plastic	Button, switch, PCB, cool fire IV plus	-
035		Silvery metal	Ring, switch, PCB, cool fire IV plus	-
036		Silvery metal	Case, switch, PCB, cool fire IV plus	-
037		Black plastic	Base, switch, PCB, cool fire IV plus	-
038		Silvery metal	Contact plate, switch, PCB, cool fire IV plus	-
039		Black plastic	Button, switch“SW2” , PCB, cool fire IV plus	-
040		Silvery metal	Ring, switch“SW2” , PCB, cool fire IV plus	-

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
041		Grey soft plastic	Cover, ring, switch“SW2” , PCB, cool fire IV plus	-
042		Silvery metal	Case, switch“SW2” , PCB, cool fire IV plus	-
043		White plastic	Base, switch“SW2” , PCB, cool fire IV plus	-
044		Silvery metal	Contact plate, switch“SW2” , PCB, cool fire IV plus	-
045		Silvery metal	Pin, AC plug , PCB, cool fire IV plus	-
046		Black plastic	Pin holder, AC plug , PCB, cool fire IV plus	-
047		Silvery metal	Contact plate, AC plug , PCB, cool fire IV plus	-
048		Black glue	Glue, AC plug , PCB, cool fire IV plus	-
049		Black body	IC, PCB, cool fire IV plus	-
050		Silvery metal	Pin, IC, PCB, cool fire IV plus	-
051		Black body	SMD IC, PCB, cool fire IV plus	-
052		Black body	SMD resistor, PCB, cool fire IV plus	-
053		Brown body	SMD capacitor, PCB, cool fire IV plus	-
054		White printed black body	Big SMD resistor, PCB, cool fire IV plus	-
055		White printed black body	SMD resistor, PCB, cool fire IV plus	-
056		White body	SMD LED, PCB, cool fire IV plus	-
057		Black body	SMD diode, PCB, cool fire IV plus	-
058		Black body	Big SMD transistor, PCB, cool fire IV plus	-
059		Black body	SMD transistor, PCB, cool fire IV plus	-
060		Silvery solder	Solder, PCB, cool fire IV plus	-
061		Green coated brown plastic with coppery metal	PCB, cool fire IV plus	-

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
062		Black body	Big SMD IC, PCB, cool fire IV plus	-
063		Black body	SMD IC, PCB, cool fire IV plus	-
064		Black body	SMD IC“U8”, PCB, cool fire IV plus	-
065		SMD diode“D8”, PCB, cool fire IV plus	-	
066		Brown body	Big SMD capacitor, PCB, cool fire IV plus	-
067		Coppery metal	Coil, inductor, PCB, cool fire IV plus	-
068		Black body	Coil holder, inductor, PCB, cool fire IV plus	-
069		Grey body	Inductor, PCB, cool fire IV plus	-
070		Silvery metal	Pin, inductor, PCB, cool fire IV plus	-
071			Black plastic	Button, cool fire IV plus
072	Translucent soft plastic		Base, button, cool fire IV plus	-
073	Black plated silvery metal		Big, button, cool fire IV plus	-
074	Black foam		Foam, cool fire IV plus	-
075		Black plated silvery metal	Housing, cool fire IV plus	-
076		Silvery metal	Housing, cool fire IV plus	-
077		Silvery metal	Frame, housing, cool fire IV plus	-
078		Silvery metal	Button holder, cool fire IV plus	-
079		Silver plated white plastic	Button, cool fire IV plus	-
080		Silver plated silvery metal	Big button, cool fire IV plus	-

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
081		Blue plated silvery metal	Housing, cool fire IV plus	-
082		Silvery metal	Pin, USB plug, adapter, cool fire IV plus	-
083		White plastic	Pin holder, USB plug, adapter, cool fire IV plus	-
084		Silvery metal	Contact plate, USB plug, adapter, cool fire IV plus	-
085		Grey plastic	Connector, USB plug, adapter, cool fire IV plus	-
086		Green/grey printed white soft plastic	Cover, USB plug, adapter, cool fire IV plus	-
087		White soft plastic	Wire jacket, adapter, cool fire IV plus	-
088		White soft plastic	Wire insulation, adapter, cool fire IV plus	-
089		Red soft plastic	Wire insulation, adapter, cool fire IV plus	-
090		Black soft plastic	Wire insulation, adapter, cool fire IV plus	-
091		Green soft plastic	Wire insulation, adapter, cool fire IV plus	-
092		Coppery metal	Wire, adapter, cool fire IV plus	-
093		Silvery metal	Pin, AC plug, adapter, cool fire IV plus	-
094		Black plastic	Pin holder, AC plug, adapter, cool fire IV plus	-
095		Silvery metal	Contact plate, AC plug, adapter, cool fire IV plus	-
096		White soft plastic	Cover, AC plug, adapter, cool fire IV plus	-

TEST RESULT

Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I001	ND	ND	ND	Negative*	NA	NA	PASS
I002	ND	ND	ND	Negative*	NA	NA	PASS
I003	ND	ND	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	NA	NA	PASS
I007	ND	ND	ND	ND	NA	NA	PASS
I008	27000*	ND	ND	ND	NA	NA	EXEMPTED [#]
I009	ND	ND	ND	ND	ND	ND	PASS
I010	ND	ND	ND	Negative*	NA	NA	PASS
I011	ND	ND	ND	ND	NA	NA	PASS
I012	ND	ND	ND	ND	ND	ND	PASS
I013	ND	ND	ND	ND	NA	NA	PASS
I014	ND	ND	ND	ND	NA	NA	PASS
I015	ND	ND	ND	ND	ND	ND	PASS
I016	ND	ND	ND	ND	ND	ND	PASS
I017	ND	ND	ND	ND	ND	ND	PASS
I018	ND	ND	ND	ND	ND	ND	PASS
I019	ND	ND	ND	ND	NA	NA	PASS
I020	ND	ND	ND	Negative*	NA	NA	PASS
I021	ND	ND	ND	Negative*	NA	NA	PASS
I022	ND	ND	ND	ND	NA	NA	PASS
I023	ND	ND	ND	ND	ND	ND	PASS
I024	ND	ND	ND	ND	ND	ND	PASS
I025	ND	ND	ND	ND	NA	NA	PASS
I026	ND	ND	ND	ND	NA	NA	PASS
I027	ND	ND	ND	ND	ND*	ND*	PASS



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Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I028	ND	ND	ND	ND	ND	ND	PASS
I029	ND	ND	ND	ND	ND	ND	PASS
I030	ND	ND	ND	ND	ND	ND	PASS
I031	ND	ND	ND	ND	ND	ND	PASS
I032	ND	ND	ND	ND	ND	ND	PASS
I033	ND	ND	ND	ND	ND	ND	PASS
I034	ND	ND	ND	ND	ND	ND	PASS
I035	ND	ND	ND	Negative*	NA	NA	PASS
I036	ND	ND	ND	Negative*	NA	NA	PASS
I037	ND	ND	ND	ND	ND	ND	PASS
I038	ND	ND	ND	ND	NA	NA	PASS
I039	ND	ND	ND	ND	ND	ND	PASS
I040	ND	ND	ND	Negative*	NA	NA	PASS
I041	ND	ND	ND	ND	ND	ND	PASS
I042	ND	ND	ND	Negative*	NA	NA	PASS
I043	ND	ND	ND	ND	ND	ND	PASS
I044	ND	ND	ND	ND	NA	NA	PASS
I045	ND	ND	ND	ND	NA	NA	PASS
I046	ND	ND	ND	ND	ND	ND	PASS
I047	ND	ND	ND	Negative*	NA	NA	PASS
I048	ND	ND	ND	ND	ND	ND	PASS
I049	ND	ND	ND	ND	ND	ND	PASS
I050	ND	ND	ND	ND	NA	NA	PASS
I051	ND	ND	ND	ND	ND	ND	PASS
I052	ND	ND	ND	ND	ND	ND	PASS
I053	ND	ND	ND	ND	ND	ND	PASS
I054	ND	ND	ND	ND	ND	ND	PASS
I055	ND	ND	ND	ND	ND	ND	PASS
I056	ND	ND	ND	ND	ND	ND	PASS
I057	ND	ND	ND	ND	ND	ND	PASS
I058	ND	ND	ND	ND	ND*	ND*	PASS
I059	ND	ND	ND	ND	ND	ND	PASS
I060	ND	ND	ND	ND	NA	NA	PASS
I061	ND	ND	ND	ND	ND*	ND*	PASS
I062	ND	ND	ND	ND	ND	ND	PASS
I063	ND	ND	ND	ND	ND	ND	PASS

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I064	ND	ND	ND	ND	ND	ND	PASS
I065	ND	ND	ND	ND	ND*	ND*	PASS
I066	ND	ND	ND	ND	ND	ND	PASS
I067	ND	ND	ND	ND	NA	NA	PASS
I068	ND	ND	ND	ND	NA	NA	PASS
I069	ND	ND	ND	Negative*	NA	NA	PASS
I070	ND	ND	ND	ND	NA	NA	PASS
I071	ND	ND	ND	ND	ND	ND	PASS
I072	ND	ND	ND	ND	ND	ND	PASS
I073	ND	ND	ND	ND	NA	NA	PASS
I074	ND	ND	ND	ND	ND	ND	PASS
I075	ND	ND	ND	ND	NA	NA	PASS
I076	ND	ND	ND	ND	NA	NA	PASS
I077	ND	ND	ND	ND	NA	NA	PASS
I078	ND	ND	ND	ND	NA	NA	PASS
I079	ND	ND	ND	ND	ND	ND	PASS
I080	ND	ND	ND	ND	NA	NA	PASS
I081	ND	ND	ND	ND	NA	NA	PASS
I082	ND	ND	ND	ND	NA	NA	PASS
I083	ND	ND	ND	ND	ND*	ND*	PASS
I084	ND	ND	ND	ND	NA	NA	PASS
I085	ND	ND	ND	ND	ND	ND	PASS
I086	ND	ND	ND	ND	ND	ND	PASS
I087	ND	ND	ND	ND	ND	ND	PASS
I088	ND	ND	ND	ND	ND	ND	PASS
I089	ND	ND	ND	ND	ND	ND	PASS
I090	ND	ND	ND	ND	ND	ND	PASS
I091	ND	ND	ND	ND	ND	ND	PASS
I092	ND	ND	ND	ND	NA	NA	PASS
I093	ND	ND	ND	Negative*	NA	NA	PASS
I094	ND	ND	ND	ND	ND	ND	PASS
I095	ND	ND	ND	Negative*	NA	NA	PASS
I096	ND	ND	ND	ND	ND	ND	PASS



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Note / Key:

ND = Not detected
NA = Not applicable
% = percent
Detection Limit : See Appendix.

“>” = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10000 mg/kg = 1 %

“<” = Less than

Remark:

- The testing approach is listed in table of Appendix.
 - * denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
 - According to European Council Directive 2011/65/EU, Article 5 “Adaptation of the Annexes to scientific and technical progress”, exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
 - #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 6(c) is reiterated here “Copper alloy containing up to 4 % lead by weight.”. Test Item(s) 008 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.
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APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analytes	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF) ^[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10 ^[b]	1 000
2	Cadmium (Cd)	50	50	50	10 ^[b]	100
3	Mercury (Hg)	100	200	200	10 ^[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3 ^[g, h] / 10 ^[d] / Sec ^[e, i]	1 000 / Negative ^[j]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50 ^[f]	Sum 1 000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50 ^[f]	Sum 1 000



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List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

NA = Not applicable

- [a] Test method with reference to International Standard IEC 62321-3-1: 2013.
- [b] Test method with reference to International Standard IEC 62321-5: 2013.
- [c] Test method with reference to International Standard IEC 62321-4: 2013.
- [d] Polymers and Electronics - Test method with reference to European Standard EN 62321: 2009, Annex C.
- [e] Metal - Test method with reference to European Standard EN 62321: 2009, Annex B^[1].
- [f] Test method with reference to European Standard EN 62321: 2009, Annex A.
- [g] Leather - Test method International Standard ISO 17075: 2007.
- [h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.
- [i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples. Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).
- [j]

Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

The testing approach was with reference to the following document(s).

- 1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
- 2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
- 3 "RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
- 4 "Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

*** End of Report ***