



XRF SCREENING AND CHEMICAL CONFIRMATION REPORT

NUMBER : THJ0050430

APPLICANT: CACTUS TECHNOLOGIES LTD
SUITE 2002 20/F
BILLION TRADE CENTER
31 HUNG TO ROAD KWUN TONG
KOWLOON HONG KONG

DATE : JUL 25, 2007

SAMPLE DESCRIPTION:

ONE (1) GROUP OF SUBMITTED SAMPLES SAID TO BE :

- SAMPLE DESCRIPTION : DISK ON MODULES
- (1) WHITE LABEL WITH GREEN/BLACK PRINTING
 - (2) CONNECTOR - BLACK PLASTIC SOCKET
 - (3) CONNECTOR - COPPERY METAL PIN
 - (4) CONNECTOR - WHITE PLASTIC SOCKET
 - (5) CONNECTOR - SILVERY METAL PIN
 - (6) PCBA (CONNECTORS WERE EXCLUDED)

STYLE / ITEM NO. : KMXXX(I) NOTE :XXX COULD BE ANY DIGIT

SERIES NO. : -201X NOTE :X CAN BE A~Z

DATE SAMPLE RECEIVED : JUL 18, 2007

DATE TEST STARTED : JUL 19, 2007

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>
SCREENING COMPONENTS OF SUBMITTED SAMPLES	SCREENING BY XRF SPECTROSCOPY AND CHEMICAL CONFIRMATION TEST FOR ROHS DIRECTIVE (2002/95/EC)	PASS

AUTHORIZED BY:
ON BEHALF OF INTERTEK TESTING SERVICES
TAIWAN LIMITED



K. Y. LIANG
DIRECTOR

THIS REPORT SHALL NOT BE REPRODUCED
EXCEPT IN FULL, WITHOUT THE WRITTEN
APPROVAL OF THE LABORATORY.



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TEST CONDUCTED

SCREENING BY XRF SPECTROSCOPY AND CHEMICAL CONFIRMATION TEST

DETERMINATION OF LEVELS OF REGULATED SUBSTANCES IN ELECTROTECHNICAL PRODUCTS, ELEMENTS OF CADMIUM (Cd), LEAD (Pb), MERCURY (Hg), CHROMIUM (Cr) AND BROMINE (Br) CONTENT WERE MEASURED BY XRF SPECTROSCOPY AND CHEMICAL CONFIRMATION TEST FOR ROHS RESTRICTED SUBSTANCES.

(I) TEST RESULT SUMMARY :

SCREENED COMPONENT	XRF RESULTS (in ppm)	CHEMICAL CONFIRMATION RESULTS (in ppm)
(1) (#2)	Cd : ND Pb : ND Hg : ND Cr : ND Br : ND	NOT TESTED
(2)	Cd : ND Pb : ND Hg : ND Cr : ND Br : INCONCLUSIVE (>300)	PBBs : ND PBDEs : ND
(3)	Cd : ND Pb : ND Hg : ND Cr : ND Br : NOT APPLICABLE	NOT TESTED
(4)	Cd : ND Pb : ND Hg : ND Cr : ND Br : ND	NOT TESTED



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(I) TEST RESULT SUMMARY :

SCREENED COMPONENT	XRF RESULTS (in ppm)	CHEMICAL CONFIRMATION RESULTS (in ppm)
(5)	Cd : ND Pb : ND Hg : ND Cr : ND Br : NOT APPLICABLE	NOT TESTED
(6) (#1)	NOT TESTED	Cd: ND Pb: 29 Hg: ND Cr ⁶⁺ : ND PBBs: ND PBDEs: ND

REMARKS: ppm = PARTS PER MILLION = mg/kg
 ND = NOT DETECTED
 > = MORE THAN
 #1 = SAMPLES WERE GROUND AND RANDOMLY SELECTED FOR TEST
 #2 = SAMPLES WERE TESTED ON JUL 25, 2007 REPORT NO. THJ0050428, AND RESULTS WERE TRANSFERRED TO THIS REPORT.

(II) XRF SCREENING LIMITS IN mg/kg FOR REGULATED ELEMENTS IN VARIOUS MATRICES .

ELEMENT	POLYMER MATERIALS	METALLIC MATERIALS	COMPOSITE MATERIALS
Cd	P ≤ 70 < X < 130 ≤ F	P ≤ 70 < X < 130 ≤ F	P ≤ 70 < X < 150 ≤ F
Pb	P ≤ 700 < X < 1300 ≤ F	P ≤ 700 < X < 1300 ≤ F	P ≤ 500 < X < 1500 ≤ F
Hg	P ≤ 700 < X < 1300 ≤ F	P ≤ 700 < X < 1300 ≤ F	P ≤ 500 < X < 1500 ≤ F
Cr	P ≤ 700 < X	P ≤ 700 < X	P ≤ 500 < X
Br	P ≤ 300 < X	NOT APPLICABLE	P ≤ 250 < X

P = PASS
 X = XRF SCREENING RESULT (WHERE FURTHER INVESTIGATION IS NECESSARY)
 F = FAIL



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(III) ESTIMATED DETECTION LIMITS IN mg/kg FOR REGULATED ELEMENTS IN VARIOUS MATRICES.

ELEMENT	POLYMER MATERIALS	METALLIC MATERIALS	COMPOSITE MATERIALS
Cd	50	70	70
Pb	100	200	200
Hg	100	200	200
Cr	100	200	200
Br	200	NOT APPLICABLE	200

DISCLAIMERS :

THIS XRF SCREENING REPORT IS FOR REFERENCE PURPOSES ONLY. THE APPLICANT SHALL MAKE ITS/HIS/HER OWN JUDGEMENT AS TO WHETHER THE INFORMATION PROVIDED IN THIS XRF SCREENING REPORT IS SUFFICIENT FOR ITS/HIS/HER PURPOSES.

THE RESULTS SHOWN IN THIS XRF SCREENING REPORT WILL DIFFER BASED ON VARIOUS FACTORS, INCLUDING WITHOUT LIMITATION, THE SAMPLE SIZE, THICKNESS, AREA, SURFACE FLATNESS, EQUIPMENT PARAMETERS AND MATRIX EFFECT (E.G. PLASTIC, RUBBER, METAL, GLASS, CERAMIC, etc.) FURTHER WET CHEMICAL PRE-TREATMENT WITH RELEVANT CHEMICAL EQUIPMENT ANALYSIS IS REQUIRED TO OBTAIN QUANTITATIVE DATA.



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(IV) CHEMICAL CONFIRMATION TEST METHODS :

<u>TESTING ITEM</u>	<u>TESTING METHOD</u>	<u>REPORTING LIMIT</u>
CADMIUM (Cd) CONTENT	WITH REFERENCE TO USEPA 3052, BY MICROWAVE DIGESTION AND DETERMINED BY ICP-OES	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO USEPA 3052, BY MICROWAVE DIGESTION AND DETERMINED BY ICP-OES	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO USEPA 3052, BY MICROWAVE DIGESTION AND DETERMINED BY ICP-OES	2 ppm
CHROMIUM (VI) (Cr ⁶⁺) CONTENT	AS PER APPLICANT'S REQUEST WITH REFERENCE TO USEPA 3060A & 7196A, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 ppm
POLYBROMINATED BIPHENYLS (PBBs)	WITH REFERENCE TO USEPA 3540C, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD OR HPLC-DAD	5 ppm
POLYBROMINATED DIPHENYL EHTERS (PBDEs)	WITH REFERENCE TO USEPA 3540C, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD OR HPLC-DAD	5 ppm

REMARK : REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE

(V) RoHS REQUIREMENT :

<u>RESTRICTED SUBSTANCES</u>	<u>LIMIT</u>
CADMIUM (Cd)	100 ppm (0.01%)
LEAD (Pb)	1000 ppm (0.1%)
MERCURY (Hg)	1000 ppm (0.1%)
CHROMIUM (VI) (Cr ⁶⁺)	1000 ppm (0.1%)
POLYBROMINATED BIPHENYLS (PBBs)	1000 ppm (0.1%)
POLYBROMINATED DIPHENYL EHTERS (PBDEs)	1000 ppm (0.1%)

REMARK : THE ABOVE RoHS LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

END OF REPORT

TEST CONDUCTED

PHOTO

