

XRF SCREENI	NG AND CHEMICAL	CONFIRMATION REPORT	NUMBER : T	HJ0050430
APPLICANT:	CACTUS TECHNOLO SUITE 2002 20/F BILLION TRADE C 31 HUNG TO ROAL KOWLOON HONG KO	ENTER KWUN TONG	DATE : J	UL 25, 2007
	GROUP OF SUBMITTE	D SAMPLES SAID TO BE : DISK ON MODULES (1)WHITE LABEL WITH (2)CONNECTOR - BLAG (3)CONNECTOR - COPI (4)CONNECTOR - WHIT (5)CONNECTOR - SILV (6)PCBA(CONNECTORS	H GREEN/BLACK P CK PLASTIC SOCK PERY METAL PIN FE PLASTIC SOCK VERY METAL PIN	ΈT
STYLE / ITEM NO. SERIES NO. DATE SAMPLE RECEIVED DATE TEST STARTED ********		: KMXXX(I) NOTE :XXX : -201X NOTE :X CAN I : JUL 18, 2007 : JUL 19, 2007	COULD BE ANY D BE A~Z	
~	STED BY THE APPL	ICANT, FOR DETAILS PLE *****		
	<u>MPLES</u> COMPONENTS OF	<u>STANDARD</u> SCREENING BY XRF SPE	CTROSCOPY AND	RESULT PASS
SUBMITTED	SAMPLES		N TEST FOR /95/EC)	

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.



#### 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)
	Cd : ND	
	Pb : ND	
(1)(#2)	Hg : ND	NOT TESTED
	Cr : ND	
	Br : ND	
	Cd : ND	
	Pb : ND	PBBs: ND
(2)	Hg : ND	PBDEs: ND
	Cr : ND	
	Br : INCONCLUSIVE(>300)	
	Cd : ND	
	Pb : ND	
(3)	Hg : ND	NOT TESTED
	Cr : ND	
	Br : NOT APPLICABLE	
	Cd : ND	
	Pb : ND	
(4)	Hg : ND	NOT TESTED
	Cr : ND	
	Br : ND	



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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 <sup>6+</sup> : 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.

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

ELEMENT	POLYMER MATERIALS	METALLIC MATERIALS	COMPOSITE MATERIALS
Cd	$P \leq 70 < X < 130 \leq F$	$P \leq 70 < X < 130 \leq F$	$P \leq 70 < X < 150 \leq F$
Pb	$P \leq 700 < X < 1300 \leq F$	$P \leq 700 < X < 1300 \leq F$	$P \leq 500 < X < 1500 \leq F$
Hg	$P \leq 700 < X < 1300 \leq F$	$P \leq 700 < X < 1300 \leq F$	$P \leq 500 < X < 1500 \leq F$
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)



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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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SCREENING BY XRF SPECTROSCOPY AND CHEMICAL CONFIRMATION TEST

(IV) CHEMICAL CONFIRMATION TEST METHODS :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
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 <sup>6+</sup> ) 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 :

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

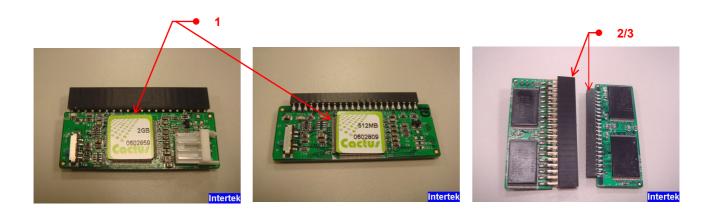
REMARK : THE ABOVE ROHS LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

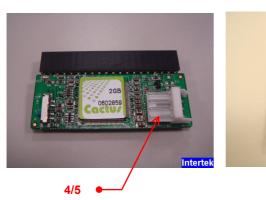
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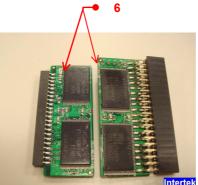


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