



Hong Kong Government Recognized Service Supplier
Approved Laboratory of The Woolmark Company

Members of :

American National Standards Institute
American Society for Testing and Materials
British Standards Institute

Hong Kong Association for Testing, Inspection and Certification Limited
Hong Kong Toys Council

TEST REPORT

NUMBER: HKGH00823203

APPLICANT: RUBADUE WIRE CO., INC.
1301 NORTH 17TH AVE.,
GREELEY CO 80631 USA

DATE: Feb 16, 2009

SAMPLE DESCRIPTION:

SEVEN (7) SUBMITTED SAMPLES SAID TO BE **SINGLE AND MULTI LAYER INSULATED WINDING WIRE ETFE COVER WITH TIN COPPER WIRE OR BARE COPPER WIRE (WITH BLACK, ORANGE, WHITE, RED, VIRGIN AND BLUE).**

REFERENCE NO. : SXX(A,B OR C)XXTX-(1.5 OR GREATER), DXX(A,B, OR C)XXTXX-(1 OR GREATER), TXX(A,B, OR C)XXTXXX-(1 OR GREATER).

COUNTRY OF ORIGIN : USA.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

FOR AND ON BEHALF OF :
INTERTEK TESTING SERVICES HK LTD.

KAREN S.C. NG
GENERAL MANAGER





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TESTS CONDUCTED

1 RoHS CHEMICAL TEST

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT	
	(1/2/3/4/5/6)	(7)
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)	ND (<2)
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (mg/kg) (FOR NON-METAL)	ND (<1)	--
CHROMIUM (VI) (Cr ⁶⁺) RESULT (BY SPOT TEST ON METAL)	--	NEGATIVE
CHROMIUM (VI) (Cr ⁶⁺) RESULT (BY BOILING WATER EXTRACTION ON METAL) (mg/kg WITH 50cm ²)	--	--
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)		
MONOBROMOBIPHENYL (MonoBB)	ND (<5)	ND (<5)
DIBROMOBIPHENYL (DiBB)	ND (<5)	ND (<5)
TRIBROMOBIPHENYL (TriBB)	ND (<5)	ND (<5)
TETRABROMOBIPHENYL (TetraBB)	ND (<5)	ND (<5)
PENTABROMOBIPHENYL (PentaBB)	ND (<5)	ND (<5)
HEXABROMOBIPHENYL (HexaBB)	ND (<5)	ND (<5)
HEPTABROMOBIPHENYL (HeptaBB)	ND (<5)	ND (<5)
OCTABROMOBIPHENYL (OctaBB)	ND (<5)	ND (<5)
NONABROMOBIPHENYL (NonaBB)	ND (<5)	ND (<5)
DECABROMOBIPHENYL (DecaBB)	ND (<5)	ND (<5)
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)		
MONOBROMODIPHENYL ETHER (MonoBDE)	ND (<5)	ND (<5)
DIBROMODIPHENYL ETHER (DiBDE)	ND (<5)	ND (<5)
TRIBROMODIPHENYL ETHER (TriBDE)	ND (<5)	ND (<5)
TETRABROMODIPHENYL ETHER (TetraBDE)	ND (<5)	ND (<5)
PENTABROMODIPHENYL ETHER (PentaBDE)	ND (<5)	ND (<5)
HEXABROMODIPHENYL ETHER (HexaBDE)	ND (<5)	ND (<5)
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND (<5)	ND (<5)
OCTABROMODIPHENYL ETHER (OctaBDE)	ND (<5)	ND (<5)
NONABROMODIPHENYL ETHER (NonaBDE)	ND (<5)	ND (<5)
DECABROMODIPHENYL ETHER (DecaBDE)	ND (<5)	ND (<5)





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mg/kg = MILLIGRAM PER KILOGRAM
 < = LESS THAN
 ND = NOT DETECTED

NEGATIVE = A NEGATIVE TEST RESULT INDICATED ABOVE POSITIVE OBSERVATION WAS NOT FOUND. WHEN THE SPOT-TEST SHOWED A NEGATIVE RESULT, THE BOILING-WATER-EXTRACTION PROCEDURE SHALL BE USED TO VERIFY THE RESULT.

REMARK : AS REQUESTED BY THE APPLICANT, DIFFERENT MATERIALS OF TESTED COMPONENTS (1/2/3/4/5/6) WERE TESTED TOGETHER.

SINCE THE APPLICANT COULD NOT PROVIDE THE SURFACE AREA OF SUBMITTED SAMPLE (7) THE BOILING WATER EXTRACTION TEST WAS NOT CONDUCTED.

TESTED COMPONENTS :

- (1) WHITE PLASTIC (BEADS).
- (2) ORANGE PLASTIC (BEADS).
- (3) BLUE PLASTIC (BEADS).
- (4) RED PLASTIC (BEADS).
- (5) BLACK PLASTIC (BEADS).
- (6) TRANSPARENT PLASTIC (BEADS).
- (7) SILVER PLATED METAL (WIRE).

(B) RoHS REQUIREMENT :

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000 ppm)

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





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(C) TEST METHOD:

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 -111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP-OES	2 mg/kg
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 -111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 -111/95/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR NON-METAL)	WITH REFERENCE TO IEC 62321 -111/95/CDV, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR METAL)	WITH REFERENCE TO IEC 62321 -111/95/CDV, BY SPOT TEST.	POSITIVE/ NEGATIVE (THRESHOLD OF 1 mg/kg)
POLYBROMINATED BIPHENYLS (PBBs) & POLYBROMINATED DIPHENYL ETHERS (PBDEs)	WITH REFERENCE TO IEC 62321 - 111/95/CDV, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY	5 mg/kg

NOTE : TESTS WERE CONDUCTED WITH REFERENCE TO 111/95/CDV VERSION 2007-10-12 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

DATE SAMPLE RECEIVED: FEB 10, 2009

TESTING PERIOD: FEB 10, 2009 TO FEB 14, 2009

END OF REPORT

