

TEST REPORT

NUMBER: BOMY19000249 - A

DATE: JULY 30TH, 2019



ORIGINAL SAMPLES

TEST REPORT

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APPLICANT: HINDALCO INDUSTRIES LTD
VILLAGE DAHALI, RAMTEK ROAD, MOUDA
NAGPUR, MAHARASHTRA - 441104

ATTN: MS. NEETU KUMARI

SAMPLE DESCRIPTION : SAMPLE – 1 (ALUMINUM FOIL)
DATE RECEIVED : 26TH JUNE, 2019
END USE : FOOD WRAPPING
MANUFACTURER'S NAME : HINDALCO INDUSTRIES LTD
COUNTRY OF ORIGIN : INDIA

TESTS CONDUCTED: AS PER THE REQUEST BY THE APPLICANT. FOR FURTHER DETAILS PLEASE REFER TO THE ENCLOSED PAGE (S).

CONCLUSION:

TESTED SAMPLE	TEST PARAMETER/STANDARD	RESULT
SAMPLE – 1 (ALUMINUM FOIL)	ROHS TEST (AS PER ROHS DIRECTIVE 2011/65/EU)	M

NOTE: M = MEET CLIENT'S REQUIREMENT F = BELOW CLIENT'S REQUIREMENT
= NO SPECIFIED REQUIREMENT N/A = NOT APPLICABLE

REMARK:

- TEST HAS BEEN PERFORMED AS PER APPLICANT'S REQUEST.
- TEST WAS SUB-CONTRACTED TO INTERTEK INDIA PVT. LTD., GURGOAN LAB.

PREPARED & CHECKED BY
for INTERTEK INDIA PVT. LTD



SANJAY SADANA
TECHNICAL MANAGER – HARDLINE

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TEST CONDUCTED:

1. ROHS TEST

[A] TEST RESULTS SUMMARY OF HEAVY METALS FOR RoHS DIRECTIVE 2011/65/EU:

TESTING ITEM	RESULTS IN PPM
	[1]
CADMIUM (Cd) CONTENT IN PPM	ND (<5)
LEAD (Pb) CONTENT IN PPM	ND (<5)
MERCURY (Hg) CONTENT IN PPM	ND (<5)
CHROMIUM (VI) CONTENT IN $\mu\text{g}/\text{cm}^2$ (ON METAL)	NEGATIVE <0.1 $\mu\text{g}/\text{cm}^2$
CHROMIUM (VI) CONTENT (BY ALKALINE DIGESTION ON NON-METAL IN PPM)	-

Remark: ppm = PART PER MILION

< = LESS THAN

ND = NOT DETECTED

TESTED COMPONENTS:

1. ALUMINUM FOIL

[B] TEST METHOD:

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 -5 : 2013 ,BY MICROWAVE OR ACID DIGESTION AND DETERMINED BY ICP-OES	5 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 -5 : 2013 ,BY MICROWAVE OR ACID DIGESTION AND DETERMINED BY ICP-OES	5 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 -4 : 2013 , BY MICROWAVE OR ACID DIGESTION AND DETERMINED BY ICP-OES	5 ppm
CHROMIUM (VI) CONTENT (FOR METAL) [Refer Note 1]	WITH REFERENCE TO IEC 62321 -7-1:2015, (BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER OR VISUAL OBSERVATION)	0.10 $\mu\text{g}/\text{cm}^2$ with 50 cm^2 (IN TESTING SOLUTION)
CHROMIUM (VI) CONTENT (FOR NON-METAL)	WITH REFERENCE TO IEC 62321:2008, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 ppm



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[C] RoHS REQUIREMENT:

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd) CONTENT	(100 ppm)
LEAD (Pb) CONTENT	1000 ppm (40000 ppm FOR BRASS/COPPER MATERIAL) (3500 ppm FOR STEEL) (4000 ppm FOR ALUMINIUM)
MERCURY (Hg) CONTENT	1000 ppm
CHROMIUM (VI) CONTENT	1000 ppm

Note 1: THE EXPLANATION OF CHROMIUM VI ANALYSIS RESULT

<u>COLORIMETRIC RESULT</u>	<u>QUALITATIVE RESULT</u>	<u>EXPLANATION</u>
<u><0.10 µg/cm²</u>	<u>NEGATIVE</u>	<u>THE RESULT OF SAMPLE IS NEGATIVE FOR CR (VI).THE SAMPLE COATING IS CONSIDERED A NON-CR (VI) BASED COATING.</u>
<u>≥0.10 µg/cm²</u> <u>And ≤0.13 µg/cm²</u>	<u>INCONCLUSIVE</u>	<u>THE RESULT OF SAMPLE IS CONSIDERED TO BE INCONCLUSIVE. IF ADDITION SAMPLE ARE AVAILABLE, RECOMMEND TO ADD TRIALS AND GET THE AVERAGE RESULT FOR FINAL DETERMINATION.</u>
<u>>0.13 µg/cm²</u>	<u>POSITIVE</u>	<u>THE RESULT OF SAMPLE IS POSITIVE FOR CR (VI). THE SAMPLE COATING IS CONSIDERED TO CONTAIN CR (VI). A RESULT EXPRESSES AS POSTIVE, WHILE NOT AN ACTUAL VALUE, WHICH INDICATES A VISUAL OBSERVATION WAS USED.</u>

THE ABOVE LIMITS WERE QUOTED FROM ANNEX II OF 2011/65/EU AND AMENDMENT EU 2015/863 FOR HOMOGENEOUS MATERIAL.

Testing Item	Result
Polybrominated Biphenyls (PBBs)	NA*
Polybrominated Diphenyl Ethers (PBDEs)	NA*
Di(2-ethylhexyl) Phthalate (DEHP)	NA*
Dibutyl Phthalate (DBP)	NA*
Benzyl Butyl Phthalate (BBP)	NA*
Diisobutyl Phthalate (DIBP)	NA*

***REMARK:** THE ELEMENTS PBB, PBDE'S, DEHP, DBP, BBP AND DIBP ARE NOT APPLICABLE ON METAL PRODUCT (ALUMINUM FOIL).

END OF TEST REPORT

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