



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

APPLICANT : **AVI GLOBAL PLAST PRIVATE. LIMITED.**  
SURVERY NO. 266/4,5,6, 269/4, 268/1,  
COASTAL HIGHWAY, VILLAGE DUNETHA,  
DAMAN -396210, INDIA

ATTN : **Mr. VENKATESH HONNATI**

SAMPLE DESCRIPTION: THE SUBMITETD SAMPLE SAID TO BE CALENDERED RIGID PVC A4 SHEETS IN COLOUR MARKED AS CLEAR TRANSPARENT.

|                              |  |
|------------------------------|--|
| COLOUR                       | : CLEAR TRANSPARENT                                    |
| BASE MATERIAL / RAW MATERIAL | : --   |
| RAW MATERIAL SUPPLIER        | : --   |
| ARTICLE NO./PART NO          | : --   |
| GRADE                        | : AVIFOOD-FOOD GRADE FOR THERMOFORMING/VACCCUM FORMING |
| BUYER'S NAME                 | : --   |
| MANUFACTURER'S NAME          | : --   |
| SAMPLE RECEIVED              | : 17 <sup>TH</sup> JANUARY, 2009                       |

\*\*\*\*\*  
 TESTS CONDUCTED: AS REQUESTED BY THE APPLICANT. FOR DETAILS REFER TO ATTACHED PAGE (S).  
 \*\*\*\*\*  
 REMARK : THE TEST REPORT NO. DELC09000492 DATED 24<sup>TH</sup> FEBRUARY, 2009 HAS BEEN REVISED TO CHANGE APPLICANT'S REUQUEST AS PER APPLICANT'S REQUEST.

PREPARED & CHECKED BY :  
for INTERTEK TESTING SERVICES, INDIA

PRAVIN MORE  
ASST. MANAGER-CHEMICAL & HARDLINE LAB



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

**CONCLUSION :**

| <u>TESTED SAMPLE</u> | <u>STANDARD</u>  | <u>RESULT</u>      |
|----------------------|--|--------------------|
| THE SUBMITTED SAMPLE | SPECIFIC HEAVY METALS CONTENT i.e. LEAD, CADMIUM, MERCURY AND CHROMIUM VI & FLAME RETARDANTS (PBB & PBDEs) – RoHS TEST | SEE TEST CONDUCTED |
|                      | PACKAGING MATERIAL EU PACKAGING (94/62/EC DIRECTIVE)   | SEE TEST CONDUCTED |
|                      | PHTHALATE TEST - AS PER EN 14372 :2004   | PASS               |
|                      | PVC TEST   | SEE TEST CONDUCTED |
|                      | VINYL CHLORIDE MONOMER (VCM) CONTENT<br>- AS PER APPLICANT'S REQUEST.  | SEE TEST CONDUCTED |
|                      | MIGRAGION TEST FOR PLASTIC FOOD CONTACTION MATERIALS/ARTICLES<br>-AS PER EUROPEAN ECONOMIC COMMUNITY 2002/72/EC        | PASS               |
|                      | DETECTION OF ASBESTOS – AS PER APPLICANT'S REUQUEST  | SEE TEST CONDUCTED |

PREPARED & CHECKED BY :  
for INTERTEK TESTING SERVICES, INDIA

PRAVIN MORE  
ASST. MANAGER-CHEMICAL & HARDLINE LAB



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

TEST CONDUCTED:

**1. RoHS TEST :**

A) TEST RESULTS SUMMARY OF HEAVY METALS FOR RoHS DIRECTIVE 2002/95/EC:

| <b>TESTING ITEM</b>  | <b>RESULTS</b> |
|--|----------------|
| CADMIUM (Cd) CONTENT IN PPM  | ND(<2)         |
| LEAD (Pb) CONTENT IN PPM   | ND(<2)         |
| MERCURY (Hg) CONTENT IN PPM  | ND(<2)         |
| CHROMIUM (VI) CONTENT IN PPM<br>(BY SPOT TEST ON METAL)  | -              |
| CHROMIUM (VI) CONTENT<br>(BY BOILING WATER EXTRACTION ON METAL)<br>(mg/kg with 50 cm <sup>2</sup> in Testing Solution) | -              |
| CHROMIUM (VI) CONTENT<br>(BY ALKALINE DIGESTION ON NON-METAL IN PPM)   | ND(<2)         |

Remark : ppm = PART PER MILION                      < = LESS THAN                      ND = NOT DETECTED

B) TEST METHOD:

| <b>TESTING ITEM</b>                      | <b>TESTING METHOD</b>  | <b>REPORTING LIMIT</b>                                      |
|--|--|---|
| CADMIUM (Cd) CONTENT                     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm   |
| LEAD (Pb) CONTENT                        | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm   |
| MERCURY (Hg) CONTENT                     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm   |
| CHROMIUM (VI) CONTENT<br>(FOR METAL)     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY SPOT TEST.  | PRESENT / ABSENT  |
| CHROMIUM (VI) CONTENT<br>(FOR METAL)     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, (BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER) | 0.02 mg/kg with 50 cm <sup>2</sup><br>(IN TESTING SOLUTION) |
| CHROMIUM (VI) CONTENT<br>(FOR NON-METAL) | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER         | 2 ppm   |

NOTE : TESTS WERE CONDUCTED FOR Cr +6 WITH REFERENCE TO 111/54/CDV VERSION 2006-05-05 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

C) RoHS REQUIREMENT :

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

**INTERTEK TESTING SERVICES INDIA PRIVATE LIMITED**  
 290, UDYOG VIHAR , PHASE – 2, GURGAON-122016, HARYANA  
 TELEPHONE : +91-0124-4503400 FAX : +91-0124-4503473 E-MAIL : [itsdelhi@intertek.com](mailto:itsdelhi@intertek.com)



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

**TESTS CONDUCTED:**

A) TEST RESULT SUMMARY OF BROMINATED FLAME RETARDANTS FOR RoHS DIRECTIVE 2002/95/EC:

| TESTING ITEM   | RESULT IN ppm |
|--|---------------|
| <b>POLYBROMINATED BIPHENYLS (PBBs) IN ppm</b>        |               |
| MONOBROMOBIPHENYL (MonoBB)                           | ND(<5)        |
| DIBROMOBIPHENYL (DiBB)                               | ND(<5)        |
| TRIBROMOBIPHENYL (TriBB)                             | ND(<5)        |
| TETRABROMOBIPHENYL (TetraBB)                         | ND(<5)        |
| PENTABROMOBIPHENYL (PentaBB)                         | ND(<5)        |
| HEXABROMOBIPHENYL (HexaBB)                           | ND(<5)        |
| HEPTA BROMOBIPHENYL (HeptaBB)                        | ND(<5)        |
| OCTABROMOBIPHENYL (OctaBB)                           | ND(<5)        |
| NONA BROMOBIPHENYL (NonaBB)                          | ND(<5)        |
| DECABROMOBIPHENYL (DecaBB)                           | ND(<5)        |
| <b>POLYBROMINATED DIPHENYL ETHERS (PBDEs) IN ppm</b> |               |
| MONOBROMODIPHENYL ETHER (MonoBDE)                    | ND(<5)        |
| DIBROMODIPHENYL ETHER (DiBDE)                        | ND(<5)        |
| TRIBROMODIPHENYL ETHER (TriBDE)                      | ND(<5)        |
| TETRABROMODIPHENYL ETHER (TetraBDE)                  | ND(<5)        |
| PENTABROMODIPHENYL ETHER (PentaBDE)                  | ND(<5)        |
| HEXABROMODIPHENYL ETHER (HexaBDE)                    | ND(<5)        |
| HEPTABROMODIPHENYL ETHER (HeptaBDE)                  | ND(<5)        |
| OCTABROMODIPHENYL ETHER (OctaBDE)                    | ND(<5)        |
| SUM OF NONABROMODIPHENYL ETHERS (NonaBDE)            | ND(<5)        |
| DECABROMODIPHENYL ETHER (DecaBDE)                    | ND(<5)        |

REMARK: ND = NOT DETECTED; ppm = PARTS PER MILLION; < = LESS THAN  
MIN DETECTION LIMIT = 5 ppm.

B) TEST METHOD:

| TESTING ITEM   | TESTING METHOD  | REPORTING LIMIT |
|--|---|-----------------|
| POLYBROMINATED BIPHENYLS (PBB) & POLYBROMINATED DIPHENYL ETHERS (PBDE) | “WITH REFERENCE TO IEC 62321-111/95/CDV, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.” | 5 ppm           |

C) RoHS REQUIREMENT:

| RESTRICTED SUBSTANCES                  | LIMITS          |
|--|-----------------|
| POLYBROMINATED BIPHENYLS (PBBs)        | 0.1% (1000 ppm) |
| POLYBROMINATED DIPHENYL EHTERS (PBDEs) | 0.1% (1000 ppm) |

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



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

TEST CONDUCTED:

**2. PACKAGING MATERIAL TEST :**

A) TEST RESULTS SUMMARY OF HEAVY METALS FOR PACKAGING MATERIAL DIRECTIVE 94/62/EC:

| <b>TESTING ITEM</b>  | <b>RESULTS</b> |
|--|----------------|
| CADMIUM (Cd) CONTENT IN PPM  | ND(<2)         |
| LEAD (Pb) CONTENT IN PPM   | ND(<2)         |
| MERCURY (Hg) CONTENT IN PPM  | ND(<2)         |
| CHROMIUM (VI) CONTENT IN PPM<br>(BY SPOT TEST ON METAL)  | -              |
| CHROMIUM (VI) CONTENT<br>(BY BOILING WATER EXTRACTION ON METAL)<br>(mg/kg with 50 cm <sup>2</sup> in Testing Solution) | -              |
| CHROMIUM (VI) CONTENT<br>(BY ALKALINE DIGESTION ON NON-METAL IN PPM)   | ND(<2)         |

Remark : ppm = PART PER MILION                      < = LESS THAN                      ND = NOT DETECTED

B) TEST METHOD:

| <b>TESTING ITEM</b>                      | <b>TESTING METHOD</b>  | <b>REPORTING LIMIT</b>                                   |
|--|--|--|
| CADMIUM (Cd) CONTENT                     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm  |
| LEAD (Pb) CONTENT                        | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm  |
| MERCURY (Hg) CONTENT                     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ACID DIGESTION AND DETERMINED BY AAS/ICP-OES                          | 2 ppm  |
| CHROMIUM (VI) CONTENT<br>(FOR METAL)     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY SPOT TEST.  | PRESENT / ABSENT   |
| CHROMIUM (VI) CONTENT<br>(FOR METAL)     | WITH REFERENCE TO IEC 62321 – 111/54/CDV, (BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER) | 0.02 mg/kg with 50 cm <sup>2</sup> (IN TESTING SOLUTION) |
| CHROMIUM (VI) CONTENT<br>(FOR NON-METAL) | WITH REFERENCE TO IEC 62321 – 111/54/CDV, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER         | 2 ppm  |

NOTE : TESTS WERE CONDUCTED FOR Cr +6 WITH REFERENCE TO 111/54/CDV VERSION 2006-05-05 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

D) PACKAGING MATERIAL DIRECTIVE 94/62/EC REQUIREMENT :

| <b>RESTRICTED SUBSTANCES</b> | <b>LIMITS</b> |
|------------------------------|---------------|
| CADMIUM (Cd) CONTENT         | 100 ppm       |
| LEAD (Pb) CONTENT            |               |
| MERCURY (Hg) CONTENT         |               |
| CHROMIUM (VI) CONTENT        |               |

**INTERTEK TESTING SERVICES INDIA PRIVATE LIMITED**  
 290, UDYOG VIHAR , PHASE – 2, GURGAON-122016, HARYANA  
 TELEPHONE : +91-0124-4503400 FAX : +91-0124-4503473 E-MAIL : [itsdelhi@intertek.com](mailto:itsdelhi@intertek.com)



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

TEST CONDUCTED:

**3. PHTHALATE CONTENT TEST :**

AS PER EN 14372 :2004, BY DIETHYL ETHER EXTRACTION, FOLLOWED BY GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC (GC-MS) ANALYSIS.

|  | <b><u>RESULT IN (ppm)</u></b> | <b><u>REQUIREMENT IN (ppm)</u></b> |
|--|-------------------------------|------------------------------------|
| <b>DIBUTYL PHTHALATE (DBP)</b>         | <100 ppm                      | 1000 ppm (0.1%)                    |
| <b>DIETHYL HEXYL PHTHALATE (DEHP)</b>  | <100 ppm                      |                                    |
| <b>DI-(ISO-NONYL) PHTHALATE (DINP)</b> | <100 ppm                      |                                    |
| <b>BENZYL BUTYL PHTHALATE (BBP)</b>    | <100 ppm                      |                                    |
| <b>DI-(N-OCTYL) PHTHALATE (DNOP)</b>   | <100 ppm                      |                                    |
| <b>DI-(ISO-DECYL) PHTHALATE (DIDP)</b> | <100 ppm                      |                                    |
| <b>SUM OF SIX PHTHALATES</b>           | <100 ppm (<0.01%)             |                                    |

REMARK : DETECTION LIMIT = 100 ppm  
ppm = PARTS PER MILLION = mg/kg  
< LESS THAN



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

**TEST CONDUCTED:**

**4. PVC TEST :**

BY FTIR ANALYSIS.

| TESTED SAMPLE        | RESULT         |
|----------------------|----------------|
| THE SUBMITTED SAMPLE | PVC IS PRESENT |

**5. VINYL CHLORIDE MONOMER (VCM) CONTENT :**

BY HEADSPACE GAS CHROMATOGRAPHIC ANALYSIS USING MASS SPECTROMETRIC DETECTOR.

| TESTED SAMPLE        | RESULT IN ppm |
|----------------------|---------------|
| The Submitted Sample | ND            |

REMARK : ppm = PARTS PER MILLION = mg/kg  
ND = NOT DETECTED  
DETECTION LIMIT = 1ppm



TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

**TEST CONDUCTED :**

**6. MIGRATION TEST FOR PLASTIC FOOD CONTACTING MATERIALS/ ARTICLES :**

AS PER EEC COMMISSION DIRECTIVE 2002/72/EC, SELECTION OF TEST CONDITION & FOOD SIMULATNS BY 82/711/EEC, 85/572/EEC, 93/8/EEC AND 97/48/EC.

I. CONDITION OF CONTACT IN ACTUAL USE:  
TEMPERATURE BETWEEN 20°C AND 40°C FOR LESS THAN 24 HOURS.

II. TEST CONDITION :

| <u>FOOD SIMULANT</u>                         | <u>TIME</u> | <u>TEMPERATURE</u> |
|--|-------------|--------------------|
| (A) DISTILLED WATER                          | 24 HOURS    | 40°C               |
| (B) 3% (W/V) ACETIC ACID IN AQUEOUS SOLUTION | 24 HOURS    | 40°C               |
| (C) 10% (V/V) ETHANOL IN AQUEOUS SOLUTION    | 24 HOURS    | 40°C               |
| (D) RECTIFIED OLIVE OIL                      | 24 HOURS    | 40°C               |

III. TEST RESULT :

| <u>FOOD SIMULANT</u>                         | <u>RESULT (mg/dm<sup>2</sup>)</u> | <u>LIMIT (mg/dm<sup>2</sup>)</u> |
|--|-----------------------------------|----------------------------------|
| (A) DISTILLED WATER                          | <1                                | 10                               |
| (B) 3% (W/V) ACETIC ACID IN AQUEOUS SOLUTION | <1                                | 10                               |
| (C) 10% (V/V) ETHANOL IN AQUEOUS SOLUTION    | <1                                | 10                               |
| (D) RECTIFIED OLIVE OIL                      | <1                                | 10                               |

REMARK : < = LESS THAN  
SOLVENT & TEST CONDITION WERE SELECTETD BASED ON FORESEEABLE USE CONDITION.

**INTERTEK TESTING SERVICES INDIA PRIVATE LIMITED**  
290, UDYOG VIHAR , PHASE – 2, GURGAON-122016, HARYANA  
TELEPHONE : +91-0124-4503400 FAX : +91-0124-4503473 E-MAIL : [itsdelhi@intertek.com](mailto:itsdelhi@intertek.com)





TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

**TEST CONDUCTED:**

**7. DETECTION OF ASBESTOS :**

BY FTIR ANALYSIS.

| <b><u>TESTED SAMPLE</u></b> | <b><u>RESULT IN ppm</u></b> |
|-----------------------------|-----------------------------|
| The Submitted Sample        | NO ASBESTOS WAS DETECTED    |

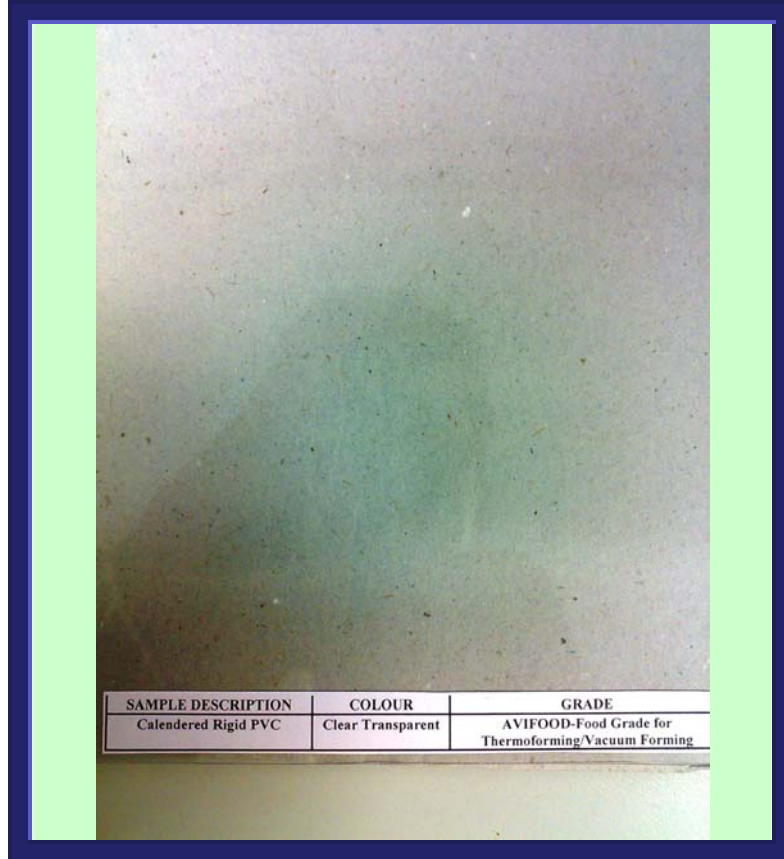


TEST REPORT

NUMBER : DELC09000492 REV-1

DATE : 03<sup>RD</sup> MARCH, 2009

PHOTO



# END OF THE TEST REPORT#