

## TEST REPORT

APPLICANT : KOSTIC FORMTEC CO.. LTD.  
ADDRESS : 120, LG-ro 360beon-gil, Wollong-myeon,  
Paju-si, Gyeonggi-do, Korea

PAGE: 1 of 8

REPORT NO. RT24R-S0248-012-E

DATE: Jan. 17, 2024

SAMPLE DESCRIPTION : The following submitted sample(s) said to be:-

NAME/TYPE OF PRODUCT : Release Film  
NAME OF MATERIAL : PET, Si  
SAMPLE ID NO. : RT24R-S0248-012  
ITEM NO. : KBS, KCS, KDS Release Film  
MANUFACTURER/VENDOR : KOSTIC FORMTEC CO.. LTD.  
NAME OF BUYER : LG, SAMSUNG

SAMPLE RECEIVED : Jan. 09, 2024  
TESTING DATE : Jan. 09, 2024 ~ Jan. 17, 2024

TEST METHOD(S) : Please see the following page(s).  
TEST RESULT(S) : Please see the following page(s).

- \* Note 1 : The test results presented in this report refer only to the object tested.
- \* Note 2 : This report shall not be reproduced except in full without the written approval of the testing laboratory.
- \* Note 3 : The item no. is assigned by client and indicated according to their requirement and guarantee letter.

Approved by,



Jade Jang / Lab. Technical Manager

Authorized by,



Bo Park / Lab. General Manager



Authenticity check

Intertek Testing Services Korea Ltd.  
Seoul Office: Tel : 02-6090-9500 Fax : 02-3409-0025 Web Site : [intertek.co.kr](http://intertek.co.kr)  
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## TEST REPORT

REPORT NO. RT24R-S0248-012-E

SAMPLE ID NO. : RT24R-S0248-012

SAMPLE DESCRIPTION : Release Film

| TEST ITEM                                    | UNIT  | TEST METHOD  | MDL | RESULT |
|--|-------|--|-----|--------|
| Cadmium (Cd)                                 | mg/kg | With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES                                | 0.5 | N.D.   |
| Lead (Pb)                                    | mg/kg |  | 5   | N.D.   |
| Mercury (Hg)                                 | mg/kg | With reference to IEC 62321-4 : 2013/AMD1 : 2017, by acid digestion and determined by ICP-OES                                | 2   | N.D.   |
| Hexavalent Chromium (Cr <sup>6+</sup> )      | mg/kg | With reference to IEC 62321-7-2 Edition 1.0 : 2017, by alkaline/toluene digestion and determined by UV-VIS Spectrophotometer | 8   | N.D.   |
| <b>Polybrominated Biphenyl (PBBs)</b>        |       |  |     |        |
| Monobromobiphenyl                            | mg/kg | With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS                              | 5   | N.D.   |
| Dibromobiphenyl                              | mg/kg |  | 5   | N.D.   |
| Tribromobiphenyl                             | mg/kg |  | 5   | N.D.   |
| Tetrabromobiphenyl                           | mg/kg |  | 5   | N.D.   |
| Pentabromobiphenyl                           | mg/kg |  | 5   | N.D.   |
| Hexabromobiphenyl                            | mg/kg |  | 5   | N.D.   |
| Heptabromobiphenyl                           | mg/kg |  | 5   | N.D.   |
| Octabromobiphenyl                            | mg/kg |  | 5   | N.D.   |
| Nonabromobiphenyl                            | mg/kg |  | 5   | N.D.   |
| Decabromobiphenyl                            | mg/kg |  | 5   | N.D.   |
| <b>Polybrominated Diphenyl Ether (PBDEs)</b> |       |  |     |        |
| Monobromodiphenyl ether                      | mg/kg | With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS                              | 5   | N.D.   |
| Dibromodiphenyl ether                        | mg/kg |  | 5   | N.D.   |
| Tribromodiphenyl ether                       | mg/kg |  | 5   | N.D.   |
| Tetrabromodiphenyl ether                     | mg/kg |  | 5   | N.D.   |
| Pentabromodiphenyl ether                     | mg/kg |  | 5   | N.D.   |
| Hexabromodiphenyl ether                      | mg/kg |  | 5   | N.D.   |
| Heptabromodiphenyl ether                     | mg/kg |  | 5   | N.D.   |
| Octabromodiphenyl ether                      | mg/kg |  | 5   | N.D.   |
| Nonabromodiphenyl ether                      | mg/kg |  | 5   | N.D.   |
| Decabromodiphenyl ether                      | mg/kg |  | 5   | N.D.   |

Tested by : Jooyeon Lee, Chano Kim, Hayan Park

Notes : mg/kg = ppm = parts per million  
 < = Less than  
 N.D. = Not detected (<MDL)  
 MDL = Method detection limit

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## TEST REPORT

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DATE: Jan. 17, 2024

REPORT NO. RT24R-S0248-012-E

SAMPLE ID NO. : RT24R-S0248-012

SAMPLE DESCRIPTION : Release Film

| TEST ITEM      | UNIT  | TEST METHOD   | MDL | RESULT |
|----------------|-------|---|-----|--------|
| Bromine (Br)   | mg/kg | With reference to EN 14582, by oxygen combustion with bomb and determined by IC | 30  | N.D.   |
| Chlorine (Cl)  | mg/kg | With reference to EN 14582, by oxygen combustion with bomb and determined by IC | 30  | N.D.   |
| Fluorine (F)   | mg/kg | With reference to EN 14582, by oxygen combustion with bomb and determined by IC | 30  | N.D.   |
| Beryllium (Be) | mg/kg | With reference to US EPA 3052, by acid digestion and determined by ICP-OES      | 2   | N.D.   |
| Antimony (Sb)  | mg/kg | With reference to US EPA 3052, by acid digestion and determined by ICP-OES      | 2   | 99     |

Tested by : Chano Kim, Jooyeon Lee

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**TEST REPORT**

REPORT NO. RT24R-S0248-012-E

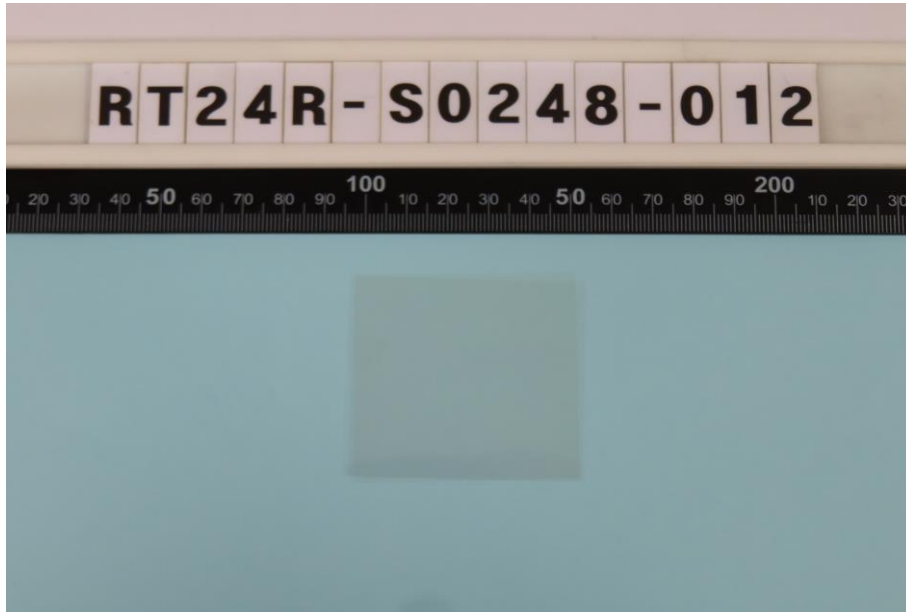
SAMPLE ID NO. : RT24R-S0248-012  
SAMPLE DESCRIPTION : Release Film

| TEST ITEM                         | CAS NO.  | UNIT  | TEST METHOD   | MDL | RESULT |
|-----------------------------------|----------|-------|---|-----|--------|
| Dibutyl phthalate (DBP)           | 84-74-2  | mg/kg | With reference to IEC 62321-8 Edition 1.0 : 2017, by solvent extraction and determined by GC/MS | 50  | N.D.   |
| Di(2-ethylhexyl) phthalate (DEHP) | 117-81-7 | mg/kg |   | 50  | N.D.   |
| Benzyl butyl phthalate (BBP)      | 85-68-7  | mg/kg |   | 50  | N.D.   |
| Diisobutyl phthalate (DIBP)       | 84-69-5  | mg/kg |   | 50  | N.D.   |

Tested by : Hayan Park

Notes : mg/kg = ppm = parts per million  
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\* View of sample as received;-



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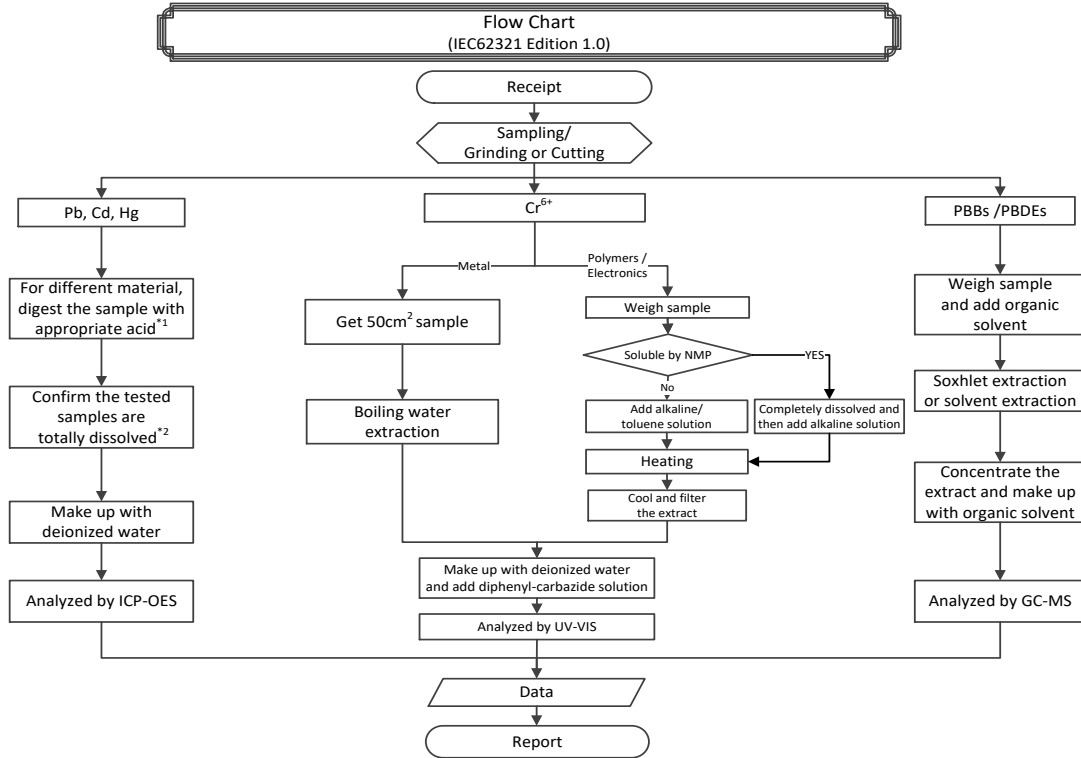
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SAMPLE ID NO. : RT24R-S0248-012

SAMPLE DESCRIPTION : Release Film



**Remarks :**

\*1 : List of appropriate acid :

| Material    | Acid added for digestion   |
|-------------|--|
| Polymers    | HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub> |
| Metals      | HNO <sub>3</sub> , HCl, HF   |
| Electronics | HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>                   |

\*2 : The samples were dissolved totally by pre-conditioning method according to above flow chart.

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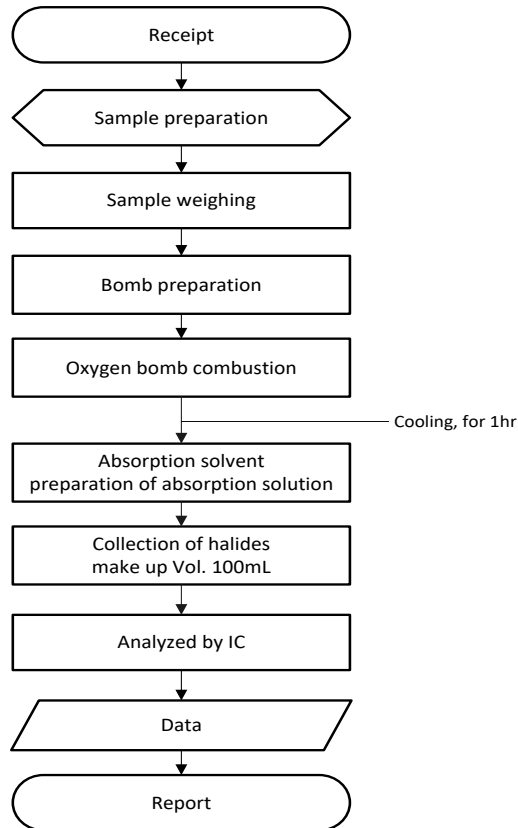
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SAMPLE DESCRIPTION : Release Film

Flow Chart (EN14582)

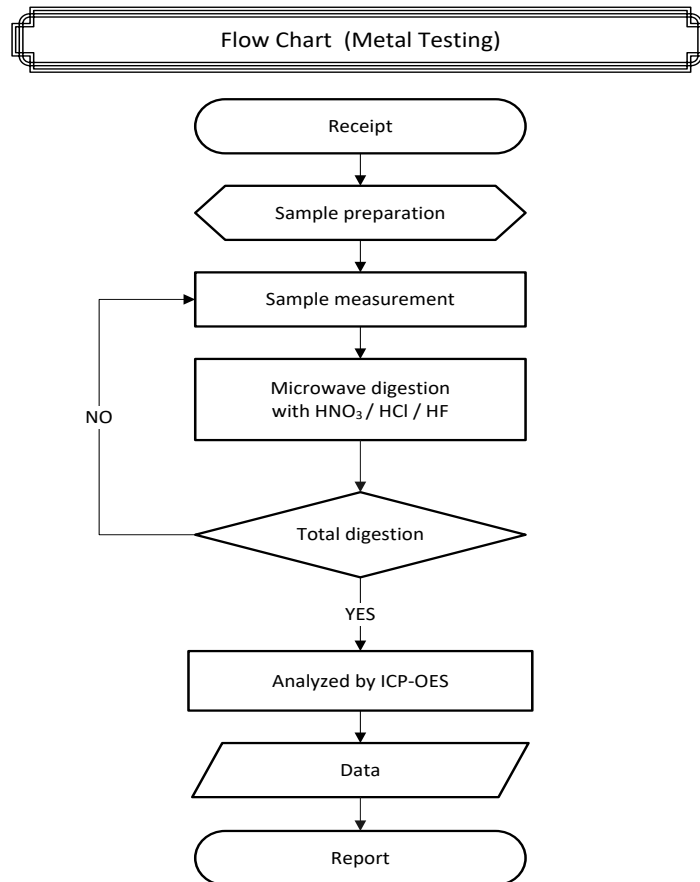


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SAMPLE DESCRIPTION : Release Film



\*\* Remarks : The samples were dissolved totally by pre-conditioning method according to above flow chart.



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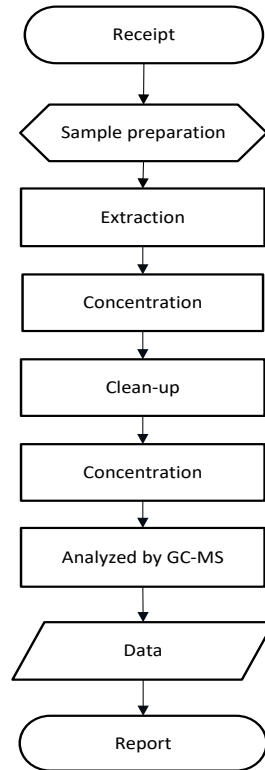
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SAMPLE ID NO. : RT24R-S0248-012

SAMPLE DESCRIPTION : Release Film

### Flow Chart (Phthalates)



\*\*\*\*\* End of Report \*\*\*\*\*

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