



## TEST REPORT

Applicant : Daewon Semiconductor Packaging Industrial Co., Ltd.  
Address : #456-1, Cheonhyun-dong,  
Hanam, Gyunggi-do, 465-816 Korea

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Report No. RT11R-S4678-001-E1

Date: Dec. 15, 2011

Sample Description : The following submitted sample(s) said to be:-

Name/Type of Product : MPPO IC Shipping Tray  
Sample ID No. : RT11R-S4678-001  
Manufacturer/Vender : Daewon Semiconductor Packaging Industrial Co., Ltd.

Sample received : Dec. 01, 2011  
Testing Date : Dec. 01, 2011 ~ Dec. 15, 2011  
Testing Environment : Temperature : ( 24 ± 2 ) °C, Humidity : ( 60 ± 5 ) % R.H.

Test Type : RoHS wet chemical analysis  
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 relate only to the object tested.

\* Note 2 : This report shall not be reproduced except in full without the written approval of the testing laboratory.

Approved by,

Jade Jang / Lab. Technical Manager

Authorized by,

Bo Park / Lab. General Manager

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Intertek Testing Services Korea Ltd.

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# TEST REPORT

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Date: Dec. 15, 2011

Report No. RT11R-S4678-001-E1

Sample ID No. : RT11R-S4678-001  
Sample Description : MPPO IC Shipping Tray

Test Item	Unit	Test Method	MDL	Result
Cadmium (Cd)	mg/kg	With reference to IEC 62321 Edition 1.0 : 2008, by acid digestion and determined by ICP-OES	0.5	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg		2	N.D.
Hexavalent Chromium (Cr <sup>6+</sup> ) (For non-metal)	mg/kg	With reference to IEC 62321 Edition 1.0 : 2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1	N.D.
Polybrominated Biphenyl (PBBs)				
Monobromobiphenyl	mg/kg	With reference to IEC 62321 Edition 1.0 : 2008, 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.
Polybrominated Diphenyl Ether (PBDEs)				
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321 Edition 1.0 : 2008, 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 : Nikkie Lee, Leo Kim, Ellen Jung, Jessica Kang

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

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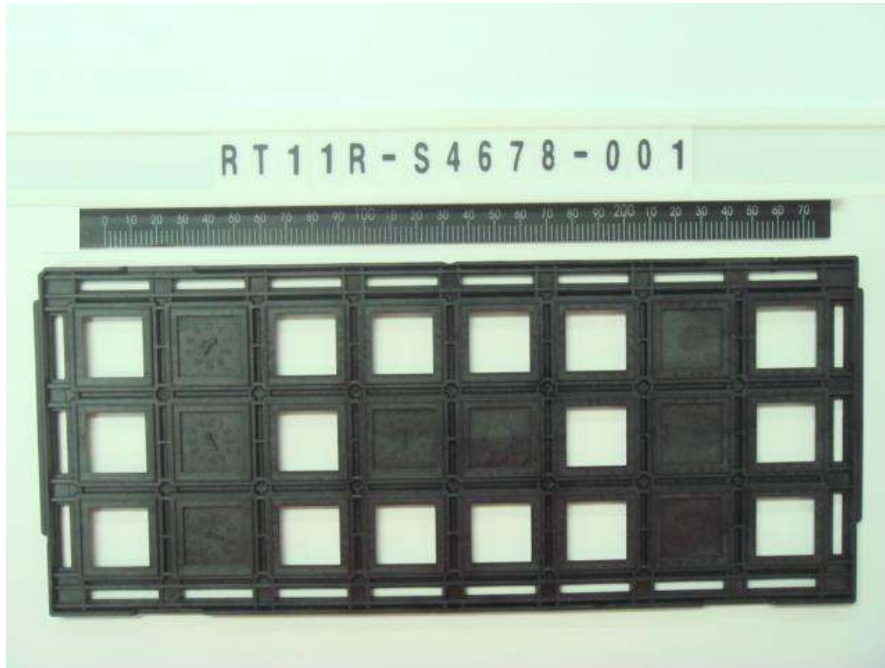
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Date: Dec. 15, 2011

Report No. RT11R-S4678-001-E1

Sample ID No. : RT11R-S4678-001  
Sample Description : MPPO IC Shipping Tray

\* View of sample as received;-



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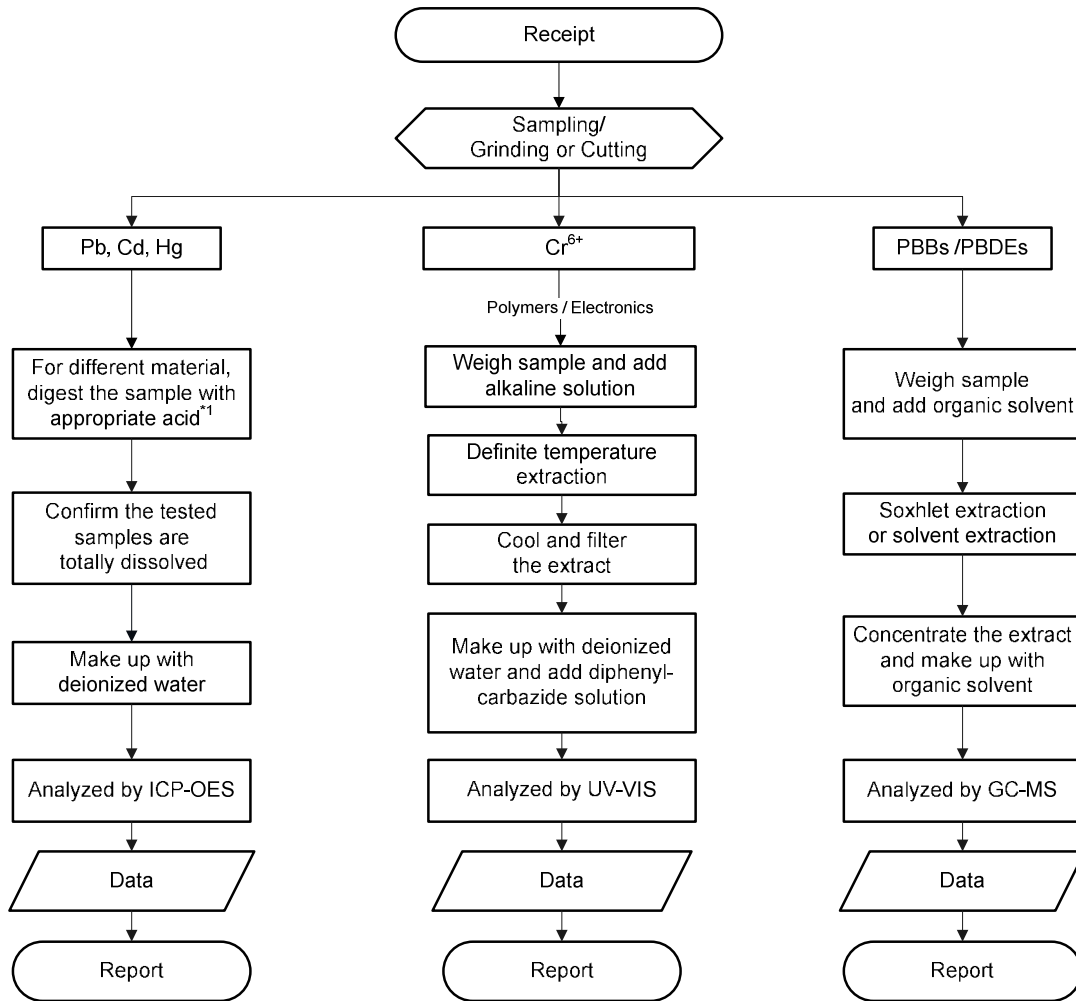
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Date: Dec. 15, 2011

Sample ID No. : RT11R-S4678-001  
Sample Description : MPPO IC Shipping Tray

**Flow Chart**  
(IEC 62321 Edition 1.0 : 2008)



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>

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

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