



TEST REPORT

Applicant : Kumho Petrochemical
Address : #260-257, Cheoyong-ro, Nam-gu,
Ulsan, 680-140 Korea

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Report No. RT14R-U0111-003-E

Date: Jan. 22, 2014

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

Name/Type of Product : ABS 780
Name of Material : ABS
Sample ID No. : RT14R-U0111-003
Manufacturer/Vender : Kumho Petrochemical

Sample received : Jan. 15, 2014
Testing Date : Jan. 15, 2014 ~ Jan. 22, 2014

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,

E.Y.Lee / Lab. Technical Manager

Authorized by,

H.W.Yoo / Lab. General Manager

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Intertek Testing Services Korea Ltd.

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Date: Jan. 22, 2014

Report No. RT14R-U0111-003-E

Sample ID No. : RT14R-U0111-003

Sample Description : ABS 780

| 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 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES | 2 | N.D. |
| Hexavalent Chromium (Cr ⁶⁺) (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 : YK Cho, HJ Kim, MB Song

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

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Report No. RT14R-U0111-003-E

Sample ID No. : RT14R-U0111-003

Sample Description : ABS 780

* View of sample as received;-



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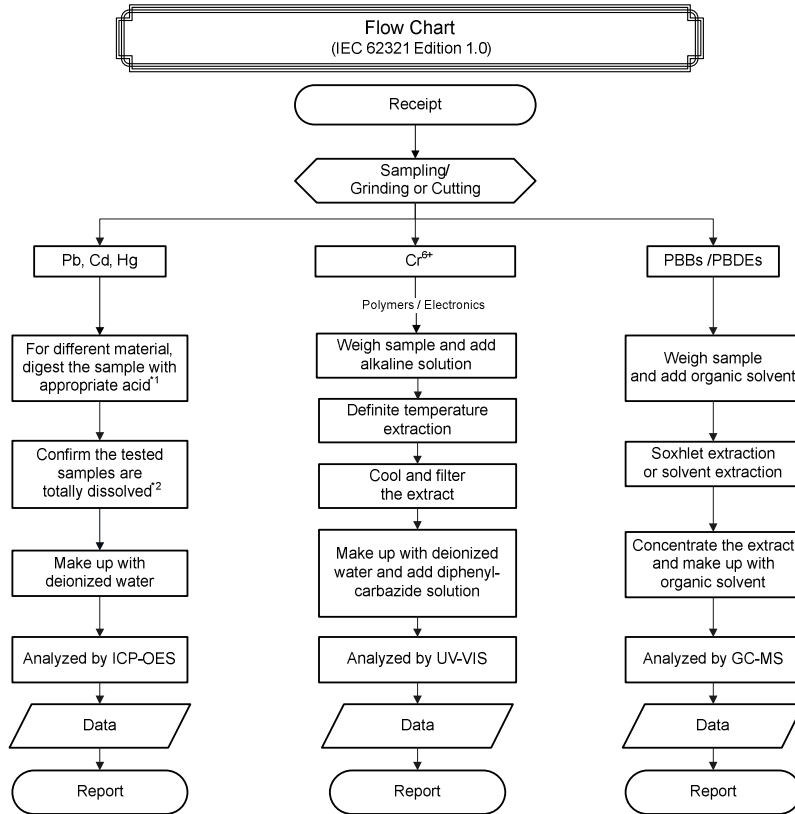


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Date: Jan. 22, 2014

Report No. RT14R-U0111-003-E

Sample ID No. : RT14R-U0111-003
Sample Description : ABS 780



Remarks :

*1 : List of appropriate acid :

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

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

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

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