

APPLICANT: KOSTIC FORMTEC CO.. LTD.

ADDRESS: 120, LG-ro 360beon-gil, Wollong-myeon,

Paju-si, Gyeonggi-do, Korea

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REPORT NO. RT25R-S0294-011-E DATE: Jan. 17, 2025

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

NAME/TYPE OF PRODUCT : CLEAR OPP(Coating)/HF LABEL

SAMPLE ID NO. : RT25R-S0294-011
ITEM NO. : Yellow Coating(HF)

MANUFACTURER/VENDOR : KOSTIC FORMTEC CO.. LTD.

SAMPLE RECEIVED : Jan. 09, 2025

TESTING DATE : Jan. 09, 2025 ~ Jan. 17, 2025

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,

Authorized by,

600

Authenticity check

Nikkie Lee / Lab. Technical Manager

Jade Jang / Lab. General Manager

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REPORT NO. RT25R-S0294-011-E DATE: Jan. 17, 2025

SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION: CLEAR OPP(Coating)/HF LABEL

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013,	0.5	N.D.
Lead (Pb)	mg/kg	by acid digestion and determined by ICP-OES	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 ⁶⁺)	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.
Polybrominated Biphenyl (PBBs)				
Monobromobiphenyl	mg/kg		5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to	5	N.D.
Pentabromobiphenyl	mg/kg	IEC 62321-6 Edition 1.0 : 2015,	5	N.D.
Hexabromobiphenyl	mg/kg	by solvent extraction and	5	N.D.
Heptabromobiphenyl	mg/kg	determined by GC/MS	5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.
Polybrominated Diphenyl Ether (P	BDEs)			
Monobromodiphenyl ether	mg/kg		5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015,	5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg	by solvent extraction and	5	N.D.
Heptabromodiphenyl ether	mg/kg	determined by GC/MS	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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REPORT NO. RT25R-S0294-011-E DATE: Jan. 17, 2025

SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION: CLEAR OPP(Coating)/HF LABEL

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.

Tested by : Chano Kim

Notes: mg/kg = ppm = parts per million

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MDL = Method detection limit









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REPORT NO. RT25R-S0294-011-E DATE: Jan. 17, 2025

SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION: CLEAR OPP(Coating)/HF LABEL

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,	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	by solvent extraction and determined by GC/MS	50	N.D.
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg		50	N.D.

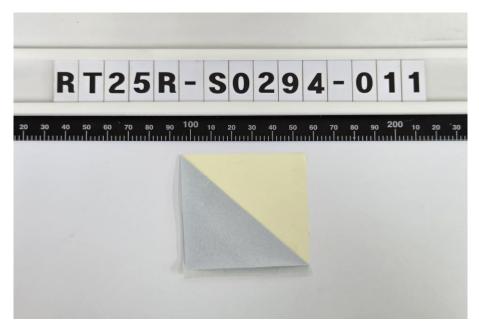
Tested by: Hayan Park

Notes: mg/kg = ppm = parts per million

< = Less than

N.D. = Not detected (<MDL)
MDL = Method detection limit

* View of sample as received;-



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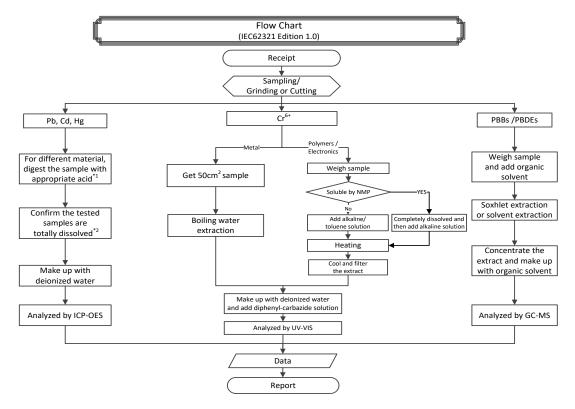


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SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION : CLEAR OPP(Coating)/HF LABEL



Remarks:
*1: List of appropriate acid:

-	List of appropriate acid:					
	Material	Acid added for digestion				
	Polymers	HNO₃, HCl, HF, H ₂ O ₂ , H3BO₃				
	Metals	HNO₃, 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.









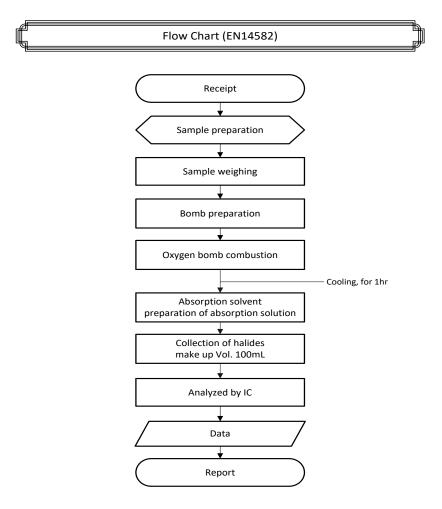
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DATE: Jan. 17, 2025

SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION: CLEAR OPP(Coating)/HF LABEL











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REPORT NO. RT25R-S0294-011-E DATE: Jan. 17, 2025

SAMPLE ID NO. : RT25R-S0294-011

SAMPLE DESCRIPTION : CLEAR OPP(Coating)/HF LABEL

Receipt
Sample preparation

Extraction

Concentration

Concentration

Analyzed by GC-MS

Data

Report

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

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