

No.: EKR23500796 Date: 25-May-2023

Page: 1 of 15

LINTEC CORPORATION

1-1-1 KOISHIKAWA, BUNKYO-KU, TOKYO 112-0002 JAPAN

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : LINTEC CORPORATION

Sample Name : ADWILL LC89R SERIES(REGARDLESS OF THICKNESS AND SIZE)

Order No. : 230427-LS-RN-01-119

Sample Receiving Date : 15-May-2023 and 23-May-2023 Testing Period : 15-May-2023 to 25-May-2023

Test Requested : (1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending

Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs,

DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) Please refer to next pages for the other item(s).

Test Results : Please refer to following pages.

Conclusion : (1) Based on the performed tests on selected part of submitted sample(s), the test

results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to

Directive 2011/65/EU.

Ray Chang Ph.D./Departmen Manager Signed for and on behalf SGS TAIWAN LTD. Chemical Laboratory-Kaohsiung



PIN CODE: 27B411DE

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No.: EKR23500796 Date: 25-May-2023 Page: 2 of 15

LINTEC CORPORATION 1-1-1 KOISHIKAWA, BUNKYO-KU, TOKYO 112-0002 JAPAN

Test Part Description

No.1 : BLACK PLASTIC FILM (EXCLUDING THE RELEASE LINNER)

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Cadmium (Cd)	With reference to IEC 62321-5: 2013,	mg/kg	2	n.d.	100
	analysis was performed by ICP-OES.				
Lead (Pb)	With reference to IEC 62321-5: 2013,	mg/kg	2	n.d.	1000
	analysis was performed by ICP-OES.				
Mercury (Hg)	With reference to IEC 62321-4: 2013+	mg/kg	2	n.d.	1000
	AMD1: 2017, analysis was performed				
	by ICP-OES.				
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017,	mg/kg	8	n.d.	1000
	analysis was performed by UV-VIS.				
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	1
Tribromobiphenyl		mg/kg	5	n.d.	1
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	1
Hexabromobiphenyl		mg/kg	5	n.d.	1
Heptabromobiphenyl		mg/kg	5	n.d.	ı
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	ı
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs	With reference to IEC 62321-6: 2015,	mg/kg	-	n.d.	1000
Monobromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	ı
Tetrabromodiphenyl ether		mg/kg	5	n.d.	ı
Pentabromodiphenyl ether		mg/kg	5	n.d.	1
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.	-
Sum of PBDEs		mg/kg	-	n.d.	1000



No.: EKR23500796 Date: 25-May-2023 Page: 3 of 15

LINTEC CORPORATION

1-1-1 KOISHIKAWA, BUNKYO-KU, TOKYO 112-0002 JAPAN

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Butyl benzyl phthalate (BBP)		mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)		mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	n.d.	1000
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)		mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321: 2008, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Perfluorooctanoic acid (PFOA) and it's salt (CAS No.: 335-67-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOS and its salts (CAS No.: 1763-23-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Polychlorinated biphenyls (PCBs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	0.5	n.d.	-
Polychlorinated naphthalene (PCNs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Polychlorinated terphenyls (PCTs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	0.5	n.d.	-
Short Chain Chlorinated Paraffins(C10-	With reference to ISO 18219-1: 2021,	mg/kg	50	n.d.	-
C13) (SCCP) (CAS No.: 85535-84-8)	analysis was performed by GC/MS.				
Polyvinyl chloride (PVC)	With reference to ASTM E1252: 2021, analysis was performed by FT-IR and Flame Test.	**	-	Negative	-
Tributyl tin (TBT)	With reference to ISO 17353: 2004, analysis was performed by GC/FPD.	mg/kg	0.03	n.d.	-



No.: EKR23500796 Date: 25-May-2023 Page: 4 of 15

LINTEC CORPORATION

1-1-1 KOISHIKAWA, BUNKYO-KU, TOKYO 112-0002 JAPAN

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Bis(tributyltin) oxide (TBTO) (CAS No.: 56-35-9)	Calculated from the result of Tributyl Tin (TBT).	mg/kg	0.03 🛦	n.d.	-
Triphenyl tin (TPT)	With reference to ISO 17353: 2004, analysis was performed by GC/FPD.	mg/kg	0.03	n.d.	-
Dioctyl tin (DOT)	With reference to ISO 17353: 2004, analysis was performed by GC/FPD.	mg/kg	0.03	n.d.	-
Dibutyl tin (DBT)	With reference to ISO 17353: 2004, analysis was performed by GC/FPD.	mg/kg	0.03	n.d.	-
Fluorine (F) (CAS No.: 14762-94-8)		mg/kg	50	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	114	-
Bromine (Br) (CAS No.: 10097-32-2)	analysis was performed by IC.	mg/kg	50	n.d.	-
lodine (I) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. **= Qualitative analysis (No Unit)
- 6. Negative = Undetectable; Positive = Detectable
- 7. PFOS and its salts including:

CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.

8. PFOA and its salts including:

CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.

9. ▲ : The MDL was evaluated for element / tested substance.

Conversion Formula : $AX = A \times F$

AX	Α	F
Bis(tributyltin)oxide (TBTO)	Tributyl Tin (TBT)	1.0276

Parameter Conversion Table: https://eecloud.sgs.com/Region_TW/DocDownload.aspx?name=Others

10. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.



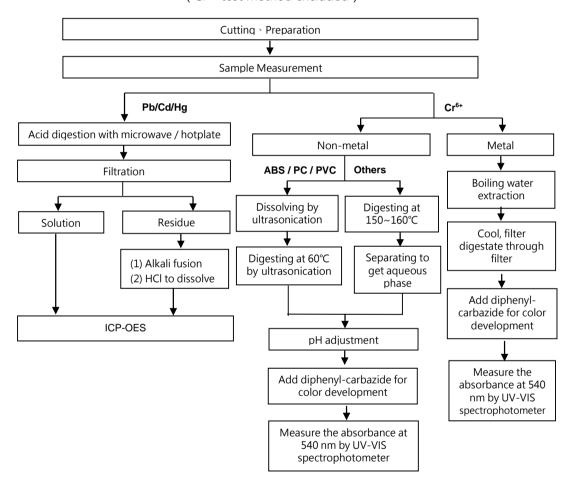
LINTEC CORPORATION 1-1-1 KOISHIKAWA, BUNKYO-KU, TOKYO 112-0002 JAPAN

Analytical flow chart of Heavy Metal

Date: 25-May-2023

No.: EKR23500796

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)



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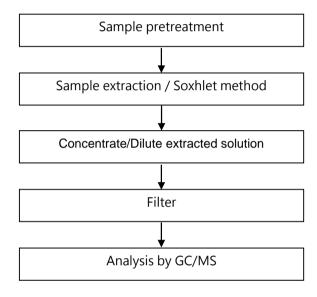
Page: 5 of 15



No.: EKR23500796 Date: 25-May-2023 Page: 6 of 15

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PBB/PBDE analytical FLOW CHART



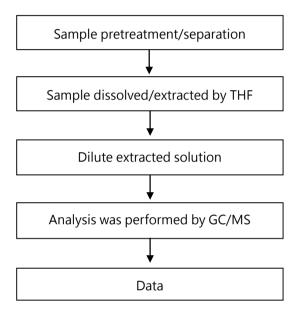


No.: EKR23500796 Date: 25-May-2023 Page: 7 of 15

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Analytical flow chart of phthalate content

【Test method: IEC 62321-8】





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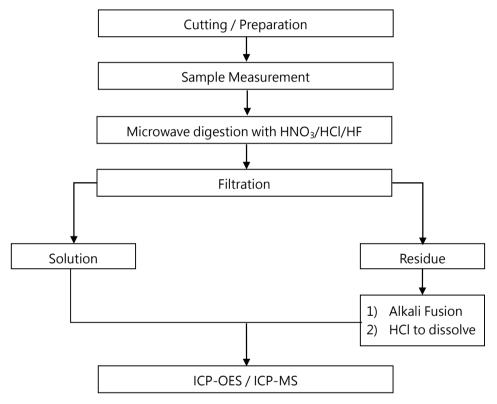
No.: EKR23500796

Analytical flow chart of Elements (Heavy metal included)

Date: 25-May-2023

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051 \ US EPA 3052】



* US EPA 3051 method does not add HF.

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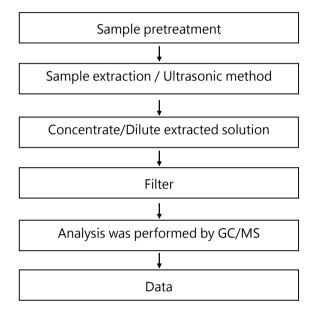
Page: 8 of 15



No.: EKR23500796 Date: 25-May-2023 Page: 9 of 15

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Analytical flow chart - HBCDD



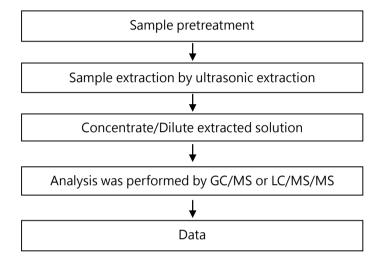


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No.: EKR23500796

Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)

Date: 25-May-2023



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Page: 10 of 15



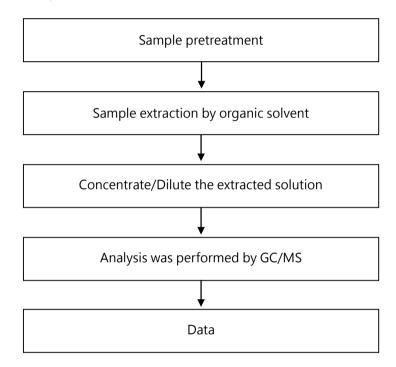
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No.: EKR23500796

Analytical flow chart

Date: 25-May-2023

* Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



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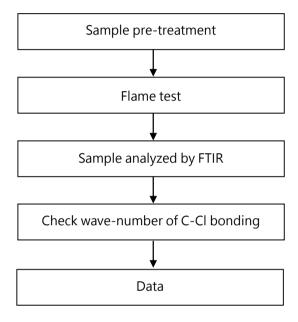
Page: 11 of 15



No.: EKR23500796 Date: 25-May-2023 Page: 12 of 15

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Analysis flow chart - PVC





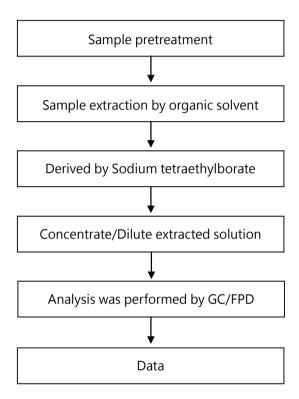
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No.: EKR23500796

Analytical flow chart - Organic-Tin

Date: 25-May-2023



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Page: 13 of 15

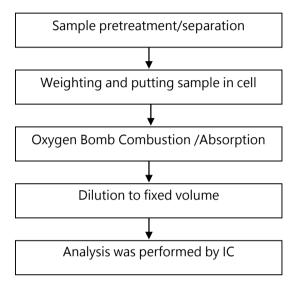


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No.: EKR23500796

Analytical flow chart of Halogen

Date: 25-May-2023



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Page: 14 of 15

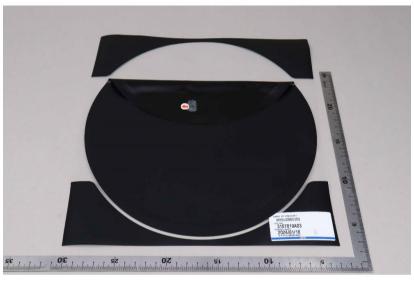


No.: EKR23500796 Date: 25-May-2023 Page: 15 of 15

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* The tested sample / part is marked by an arrow if it's shown on the photo. *

EKR23500796



** End of Report **