

Date : 2020/07/27

Page: 1 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

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

Sample Submitted By	:	KESTER LLC
Sample Description	:	SeCure 9753RJ9
Sample Receiving Date	:	2020/07/20
Testing Period	:	2020/07/20 to 2020/07/27

•

Test Requested

 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 Result(s)

: Please refer to following pages.

Conclusion

:

(1) Based on the performed tests on 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.





PIN CODE: 69035E45



Date : 2020/07/27

Page: 2 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

Test Result(s)

PART NAME No.1 : TRANSPARENT GLUE

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



Date : 2020/07/27

Page: 3 of 8

KESTER LLC

800 W. THORNDALE AVE. ITASCA, IL 60143

Test Item(s)	Unit	Method	MDL	Result	Limit
				No.1	
BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	1000
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	1000
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	1000
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	1000
DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0; 68515-49- 1)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	-
DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0; 68515-48- 0)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	-
DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	mg/kg	With reference to IEC 62321-8: 2017. Analysis was performed by GC/MS.	50	n.d.	-
Halogen					
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582: 2016. Analysis was performed by IC.	50	n.d.	-
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582: 2016. Analysis was performed by IC.	50	n.d.	-
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582: 2016. Analysis was performed by IC.	50	6730	-
Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg	With reference to BS EN 14582: 2016. Analysis was performed by IC.	50	n.d.	-

Note :

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected = less than MDL
- 4. " " = Not Regulated
- 5. The statement of compliance conformity is based on comparison of testing results and limits.



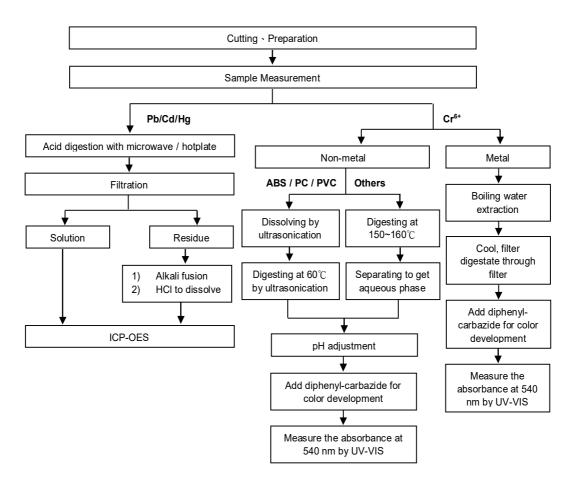
Date : 2020/07/27

Page: 4 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)



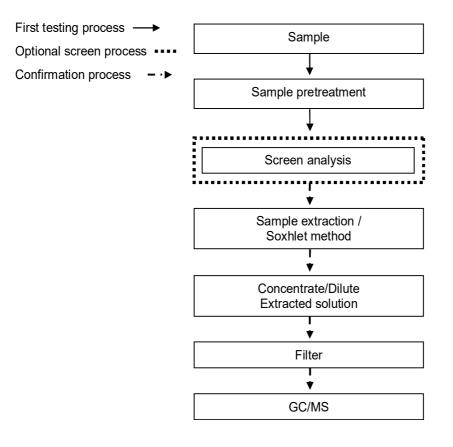


Date : 2020/07/27

Page: 5 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

Analytical flow chart – PBB / PBDE





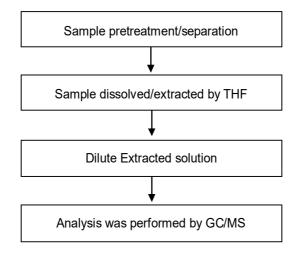
Date : 2020/07/27

Page: 6 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

Analytical flow chart - Phthalate

[Test method: IEC 62321-8]

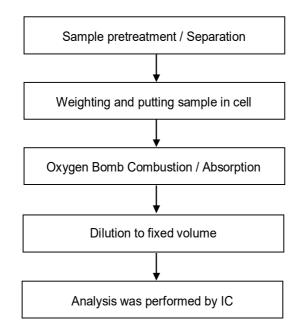




Date : 2020/07/27

Page: 7 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143



Analytical flow chart - Halogen



Date : 2020/07/27

Page: 8 of 8

KESTER LLC 800 W. THORNDALE AVE. ITASCA, IL 60143

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



** End of Report **