

Report No.: 48249936a 001

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Client: Chin Sing Precision Industry Co, Ltd.
No. 21, Chenggong 3rd St., Minxiong Township, Chiayi County 621, Taiwan,
R.O.C.

Test item(s): Lock Nuts

Identification/Model No(s): Lock Nuts/ KM00, KM01, KM02, KM03, KM04, KM05, KM06, KM07, KM08,
KM09, KM10, KM11, KM12, KM13, KM14, KM15, KM16, KM17, KM18, KM19,
KM20, KM21, KM22, KM24, KM25, KM26, KM27, KM28, KM30, KM32, KM34,
KM36, KM38, KM40, N05, N06, N07, N08, N09, N10, N11, N12, N13, N14, AN15,
AN16, AN17, AN18, AN19, AN20, AN21, AN22

Sample obtaining method: Sending by customer

Condition at delivery: Test item complete and undamaged.

Sample receiving date: 2024-07-12

Testing period: 2024-07-12 – 2024-07-23

Place of testing: TÜV Rheinland Hong Kong Ltd.

Test specification:

According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU Annex II and its amendment Directive (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP)

Test result:

Pass

Other information: The test sample is model no. KM01. All the above models are the same chemical composition/color/manufacturing process, only size/shape is different according to client's declaration dated on 2024-07-11.

For and on behalf of
TÜV Rheinland Taiwan Ltd.


Arthur Cheng/Project Manager
Name/Position



2024-07-25
Date

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed. This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products. "Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report..

Material List:

Item: Lock Nuts/ KM00, KM01, KM02, KM03, KM04, KM05, KM06, KM07, KM08, KM09, KM10, KM11, KM12, KM13, KM14, KM15, KM16, KM17, KM18, KM19, KM20, KM21, KM22, KM24, KM25, KM26, KM27, KM28, KM30, KM32, KM34, KM36, KM38, KM40, N05, N06, N07, N08, N09, N10, N11, N12, N13, N14, AN15, AN16, AN17, AN18, AN19, AN20, AN21, AN22

Mat. No.	Material	Color	Lab no.
1	Metal	Metallic	TCL240712-05

Test sample



KM00~KM20



KM21~KM40



N05~N14



AN15~AN22

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Test Method : Total Cadmium, Lead, Mercury, Chromium
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013
 Chromium (VI)
 - For Metal material - Ref. to IEC 62321-7-1:2015
 - For Polymer, Electronic material or others materials - Ref. to IEC 62321-7-2:2017
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

Material No.

1

Parameter	Unit	RL	Result
Cadmium (Cd)	mg/kg	2	< RL
Lead (Pb)	mg/kg	2	< RL
Mercury (Hg)	mg/kg	2	< RL
Chromium VI (Cr VI)*	µg/cm ²	0.1	< RL
Sum of Polybrominated biphenyls (PBBs)	mg/kg	-	< RL
Monobromobiphenyl	mg/kg	5	< RL
Dibromobiphenyl	mg/kg	5	< RL
Tribromobiphenyl	mg/kg	5	< RL
Tetrabromobiphenyl	mg/kg	5	< RL
Pentabromobiphenyl	mg/kg	5	< RL
Hexabromobiphenyl	mg/kg	5	< RL
Heptabromobiphenyl	mg/kg	5	< RL
Octabromobiphenyl	mg/kg	5	< RL
Nonabromobiphenyl	mg/kg	5	< RL
Decabromobiphenyl	mg/kg	5	< RL
Sum of Polybrominated diphenyl ethers (PBDEs)	mg/kg	-	< RL
Monobromodiphenyl ether	mg/kg	5	< RL
Dibromodiphenyl ether	mg/kg	5	< RL
Tribromodiphenyl ether	mg/kg	5	< RL
Tetrabromodiphenyl ether	mg/kg	5	< RL
Pentabromodiphenyl ether	mg/kg	5	< RL
Hexabromodiphenyl ether	mg/kg	5	< RL
Heptabromodiphenyl ether	mg/kg	5	< RL
Octabromodiphenyl ether	mg/kg	5	< RL
Nonabromodiphenyl ether	mg/kg	5	< RL
Decabromodiphenyl ether	mg/kg	5	< RL

Notes:

- < = less than
- RL = Reporting Limit
- n.a. = not applicable
- mg/kg = milligram per kilogram
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

Chromium (VI) concentration	Qualitative result
<0.1µg/cm ²	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
≥0.1µg/cm ² and ≤0.13 µg/cm ²	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
>0.13 µg/cm ²	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

	Cd	Cr(VI)	Pb	Hg	PBBs	PBDEs
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000	1000	1000

Test Method : BBP/DBP/DEHP/DIBP - Ref. to IEC 62321-8:2017

Material No.	1		
Parameter	Unit	RL	Result
Benzylbutylphthalate (BBP)	mg/kg	50	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL

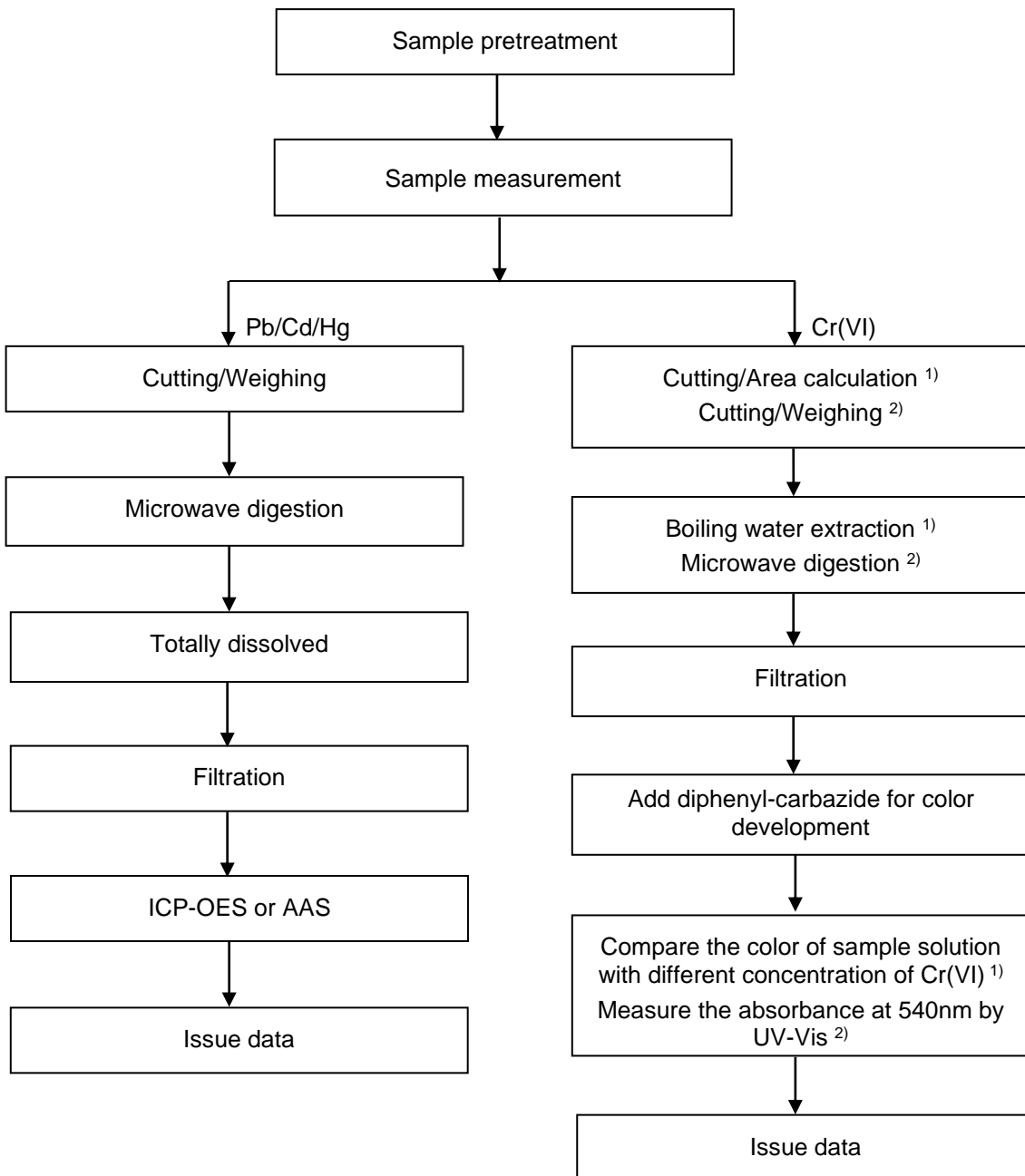
Notes:

- < = less than
- RL = Reporting Limit
- n.a. = not applicable
- mg/kg = milligram per kilogram

	BBP	DBP	DEHP	DIBP
Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg)	1000	1000	1000	1000

Testing procedure:

RoHS (Pb, Cd, Hg, Cr(VI))

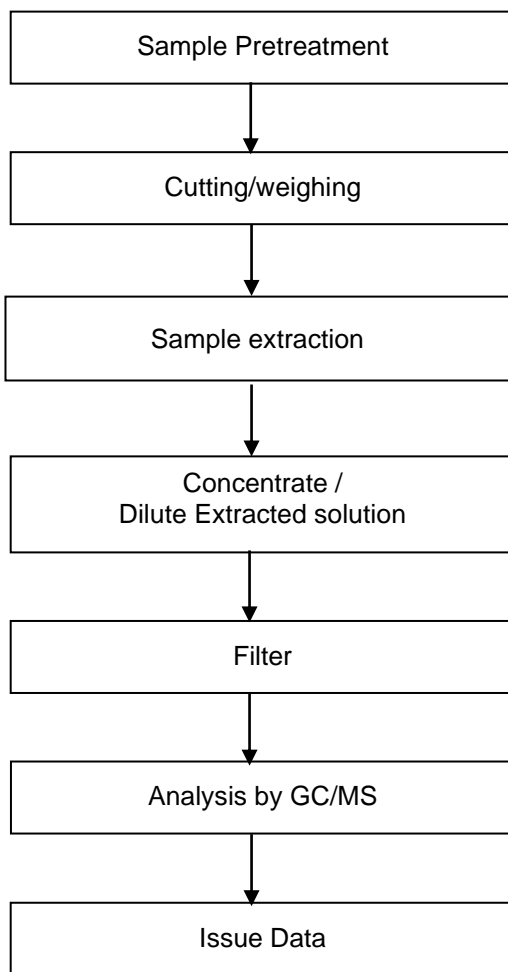


Notes: ¹⁾ For metallic material

²⁾ For non-metallic material

Testing procedure:

RoHS (PBBs/PBDEs, DEHP/DBP/BBP/DIBP)



--- End of Test-Report ---