

SVHC Assessment Report 高度關注物質評估報告

Number : TWNC00717159
報告號碼Applicant: 申請廠商 HMD Global Oy
Karaportti 2, 02610 Espoo, Finland.

Date 日期 : Oct 19, 2018

Sample Description 樣品敘述:

One (1) group of submitted samples said to be :

以下測試樣品乃供應商所提供及確認:

Sample Description : Smart Phone ROO

樣品名稱

Style / Item No. : TA-1118, TA-1117, TA-1104, TA-1113, TA-1125, TA-1115

產品型號

Date Sample Received : Aug 01, 2018 / Sep 17, 2018 / Oct 01, 2018

收件日期

Date Test Started : Aug 01, 2018 / Sep 17, 2018 / Oct 01, 2018

開始測試日期

Test Conducted 測試執行:

As requested by the applicant, the submitted samples were combined into one group and a composite test based on weight ratio was conducted. For details, please refer to attached pages.

依申請商之要求，送檢樣品依據材質進行拆解，並且根據重量比例進行混合測試，細節請參考附頁。

Authorized By:
On behalf of Intertek Testing Services
Taiwan LimitedMatt Wang
Sr. Manager

Signed by:

Thomas Chou
Manager

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Summary 摘要:

According to the client's request, a composite screening test was conducted for the **191** Substances of Very High Concern (SVHC) in the Candidate List promulgated by the European Chemicals Agency (ECHA) on June 27, 2018.

依據客戶要求，針對由歐盟化學總署(ECHA)於 2018 年 06 月 27 日所頒佈，列於候選清單中的 **191** 項高度關注物質(SVHC)進行篩檢測試。

This assessment report is for reference purposes only. The applicant shall make his/her own judgment as to whether the information provided in assessment report is sufficient for his/her purposes. The screening results shown in this assessment report will be in relation to various factors, including but not limited to the weight or size of dismantled component and composite test approach, etc. If the content of SVHC is out of the threshold, further identification is recommended to obtain the information of SVHC in each material.

本評估報告僅作為參考之用，申請者應自行評估本報告中所提供的資訊是否符合其申請目的。評估結果與許多因素有關，包括拆解後零件的重量、大小，以及混合測試方式等各種因素。如果任何 SVHC 物質超過限值時，建議進一步鑑定，以獲得每一材料 SVHC 的含量。

The thresholds and SVHCs are defined in Article 7 and 57 of Regulation (EC) No 1907/2006 (REACH Regulation). The information is quoted from the ECHA and can be found via following links:

高度關注物質的限值與定義是依據 (EC) No 1907/2006 法規(REACH)第 7 節與第 57 節所規定。相關訊息引用自歐盟化學總署(ECHA)，相關資料可見於以下連結網站。

- <http://echa.europa.eu/regulations/reach/authorisation>
- http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Substances of Very High Concern (SVHC) are classified as 下列物質將被歸類為高度關注物質(SVHC)

- carcinogenic, mutagenic or toxic to reproduction (CMR) classified in category 1 or 2, 歸類於第一或第二類致癌性、致誘變性、致生殖毒性質物質(CMR)
- PBT (PBT) or vPvB (vPvB) according to the criteria in Annex XIII of the REACH Regulation, and/or 依據 REACH 法規附錄 13 規定，具持久性、生物累積性、毒性質物質(PBT)或高持久性、生物累積性質物質(vPvB)物質，與/或
- Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to humans or the environment of an equivalent level of concern as those above e.g. endocrine disruptors 透過個案研究，以科學證據證明可能造成對人類或環境造成如同上述嚴重影響的物質，例如擾亂內分泌物質。

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Legal obligations 法律責任

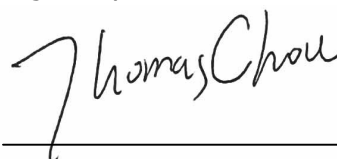
- a. EU and EEA producers and importers of articles have a legal obligation to submit a notification to ECHA with regard to any substance on the Candidate List in their articles, if both the following conditions are met 假如下列兩種情形符合時，歐盟和歐洲經濟區的物品生產者或進口者就有向歐盟化學總署(ECHA)進行任何屬於候選清單中物質的通報法律責任。
- the substance is present in their relevant articles above a concentration of 0.1% weight by weight, and 該物質存在於物品中且濃度超過 0.1%(重量百分比), 而且
 - the substance is present in their relevant articles in quantities totalling over 1 tonne per year. 該物質存在於物品中且年總量超過 1 噸。
- b. EU and EEA suppliers of articles which contain substances on the Candidate List in a concentration above 0.1% (w/w) have to provide sufficient information to allow safe use of the article to their customers or upon request, to a consumer within 45 days of the receipt of the request. This information must contain as a minimum the name of the substance. 如果物品含有重量百分比超過 0.1% 的高度關注物質時，歐盟和歐洲經濟區的供應者應該在收到要求後 45 天內，提供足夠的資訊給他們的客戶或提出需求者以安全使用該物品，這些資訊至少應包含物質的名稱。

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Test Conducted 測試內容：

Tested Components 測試部件表：

Please refer to attached photos 請參考附件照片

	Tested Component 測試元件	Weight (g) 重量	Ratio% (w/w) 比例
(1)	Metal Part 金屬元件	71.5	40.5
(2)	Non-metal Part 非金屬元件	11.9	6.8
(3)	Glass 玻璃	29.4	16.7
(4)	Battery 電池	47.0	26.6
(5)	PCB Assembly 電路板總成	16.5	9.4
	Total 總和	176.3	100.0

	Tested Component 測試元件
(6)	Metal and Non-metal Part 金屬和非金屬元件

Remark: The weight of tested component was based on unit of article (one piece).
備註 測試元件的重量是根據單一產品拆解稱重。

Test Method 測試方法：

By Intertek in-house method 以 Intertek 內部方法

1. Acid digestion or aqueous extraction methods were used and the relevant elements were determined by ICP-OES. 以酸消化或水溶液萃取測試樣品，並用感應耦合電漿原子放射光譜儀分析相關元素。
2. Further confirmation test was performed by UV-Vis (non-metal part) or spot test (metal part) for Cr⁶⁺. 必要時，六價鉻之確認，非金屬元件以紫外光-可見光分光光度計分析，金屬元件以點測試法確認。
3. Solvent extraction method was used for semi-volatile and non-volatile organic compounds and the relevant compounds were determined by GC-MS, GC-ECD, HPLC-DAD or LC-MS-MS. 半揮發性或不揮發性有機物質以溶劑萃取，並用氣相層析質譜儀，氣相層析儀電子捕捉偵測器，高效液相層析光二極體陣列偵測儀或串聯式液相層析質譜儀分析。



Test Conducted 測試內容 :

Test Result Summary 測試結果:

Test Date 測試日期: Aug 17, 2018/ Oct 01, 2018

No.	Substance Name 物質名稱	Result 結果 (ppm)					Sum 合計濃度 (% w/w)
		(1)	(2)	(3)	(4)	(5)	
1	Cobalt dichloride 二氯化鈷	ND	ND	ND	ND (#2)	ND	ND
37	Cobalt(II) sulphate 硫酸鈷(II)	ND	ND	ND	ND (#2)	ND	ND
38	Cobalt(II) dinitrate 硝酸鈷(II)	ND	ND	ND	ND (#2)	ND	ND
39	Cobalt(II) carbonate 碳酸鈷(II)	ND	ND	ND	ND (#2)	ND	ND
40	Cobalt(II) diacetate 醋酸鈷(II)	ND	ND	ND	ND (#2)	ND	ND
154	Sodium perborate; Perboric acid, sodium salt 過硼酸鈉	ND	ND	128 (#1)	ND	ND	0.0021
167	1,3-Propanesultone 1,3-丙烷磺內酯	ND	ND	ND	14065	ND	0.3746

Tested Date 測試日期: Sep 17, 2018

No.	Substance Name 物質名稱	Result 結果 (ppm)
		(6)
--	Substances of Very High Concern (SVHC) in the Candidate List 候選清單中高度關注物質(SVHC)	All SVHC were not detected 所有 SVHC 皆未檢出

Remarks: The test result of SVHC which is more than detection limit will be listed.

備註 僅列出測試結果超過偵測極限的 SVHC。

ppm = Parts per million 百萬分之一 = mg/kg 毫克/公斤

ND = Not detected = 未檢測出

Detection limit = 100 ppm (for each compound) = 偵測極限 (每一個成份)

Sum (% w/w) = $\frac{\sum X_i(\text{ppm}) \times W_i(\text{g})}{W_T(\text{g}) \times 10000}$ = 合計濃度

X_i = Content in component (i = 1, 2, 3, 4, 5) = 元件濃度

W_i = Weight of component (i = 1, 2, 3, 4, 5) = 元件重量

W_t = Weight of submitted sample = 送檢樣品重量

#1 = A possibility exists that these substances may be present in the tested components. The content of these substances were calculated based on the content of Boron (B).
這些物質可能存在於測試部件中，是由硼(B)含量計算得知。

#2 = The high concentration of Cobalt (Co) was detected in battery. However, according to the declaration claimed by applicant the battery uses the Lithium Cobaltite (LiCoO₂) in positive electrode. The compound is not SVHC so the test result is "ND".
在電池中測到高濃度的鈷。然而，根據客戶提供的聲明，該電池是以鋰鈷氧化物作為陽極材料，此物質並非 SVHC，所以測試結果為“未檢測出”。



Test Conducted 測試內容 :

Appendix – 191 Substances of Very High Concern (SVHC) in the Candidate List
附錄 - 候選清單中的 191 項高度關注物質(SVHC)

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
1	Cobalt dichloride 二氯化鈷	231-589-4	7646-79-9	Carcinogenic Mutagenic
2	Diarsenic pentaoxide 五氧化二砷	215-116-9	1303-28-2	Carcinogenic
3	Diarsenic trioxide 三氧化二砷	215-481-4	1327-53-3	Carcinogenic
4	Lead hydrogen arsenate 酸式砷酸鉛	232-064-2	7784-40-9	Carcinogenic TRC
5	Triethyl arsenate 三乙基砷酸酯	427-700-2	15606-95-8	Carcinogenic
6	Sodium dichromate, dihydrate 重鉻酸鈉二水合物	234-190-3	7789-12-0	Carcinogenic Mutagenic TRC
7	Bis (tributyltin)oxide (TBTO) 三丁基氧化錫	200-268-0	56-35-9	PBT
8	Anthracene 蒽	204-371-1	120-12-7	PBT
9	4,4'-Diaminodiphenylmethane (MDA) 4,4'-二氨基二苯甲烷	202-974-4	101-77-9	Carcinogenic
10	Dibutyl phthalate (DBP) 鄰苯二甲酸二丁酯	201-557-4	84-74-2	TRC, EDP
11	5-tert-Butyl-2,4,6-trinitro-m-xylene (musk xylene) 5-叔丁基-2,4,6-三硝基間二甲苯(二甲苯麝香)	201-329-4	81-15-2	vPvB
12	Bis(2-ethylhexyl) phthalate (DEHP) 鄰苯二甲酸二(2-乙基己基)酯	204-211-0	117-81-7	TRC, EDP
13	Hexabromocyclododecane (HBCDD) 六溴環十二烷	247-148-4 221-695-9	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	PBT
14	Benzyl butyl phthalate (BBP) 鄰苯二甲酸苯基丁酯	201-622-7	85-68-7	TRC, EDP
15	Short chain chlorinated paraffins (C10-13) 短鏈氯化石蠟	287-476-5	85535-84-8	PBT
16	Anthracene oil 蒽油	292-602-7	90640-80-5	PBT, vPvB
17	Anthracene oil, anthracene paste, distn. lights 蒽油, 蒽糊, 輕油	295-278-5	91995-17-4	PBT, vPvB, Carcinogenic Mutagenic
18	Anthracene oil, anthracene paste, anthracene fraction 蒽油, 蒽糊, 蒽餾分離液	295-275-9	91995-15-2	PBT, vPvB, Carcinogenic Mutagenic
19	Anthracene oil, anthracene-low 蒽油, 含蒽量少	292-604-8	90640-82-7	PBT, vPvB, Carcinogenic Mutagenic
20	Anthracene oil, anthracene paste 蒽油, 蒽糊	292-603-2	90640-81-6	PBT, vPvB, Carcinogenic Mutagenic



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
21	Coal tar pitch, high temp. 煤瀝青, 高溫	266-028-2	65996-93-2	PBT, vPvB, Carcinogenic
22	Acrylamide 丙烯醯胺	201-173-7	79-06-1	Carcinogenic Mutagenic
23	2,4-Dinitrotoluene 2,4-二硝基甲苯	204-450-0	121-14-2	Carcinogenic
24	Diisobutyl phthalate (DIBP) 鄰苯二甲酸二異丁酯	201-553-2	84-69-5	TRC, EDP
25	Lead chromate 鉻酸鉛	231-846-0	7758-97-6	Carcinogenic TRC
26	Lead chromate molybdate sulphate red (C.I. Pigment red 104) 紅色鉬鉻酸鉛硫酸鹽(C.I.紅色 104)	235-759-9	12656-85-8	Carcinogenic TRC
27	Lead sulfochromate yellow (C.I. Pigment yellow 34) 黃色硫化鉻酸鉛(C.I.黃色 34)	215-693-7	1344-37-2	Carcinogenic TRC
28	Tris(2-chloroethyl) phosphate (TCEP)三 2-(氯乙基)磷酸酯	204-118-5	115-96-8	TRC
29	Trichloroethylene 三氯乙烯	201-167-4	79-01-6	Carcinogenic
30	Boric acid 硼酸	233-139-2 234-343-4	10043-35-3 11113-50-1	TRC
31	Disodium tetraborate, anhydrous 無水四硼酸二鈉	215-540-4	1330-43-4 12179-04-3 1303-96-4	TRC
32	Tetraboron disodium heptaoxide, hydrate 含水七氧化四硼酸二鈉	235-541-3	12267-73-1	TRC
33	Sodium chromate 鉻酸鈉	231-889-5	7775-11-3	Carcinogenic Mutagenic TRC
34	Potassium chromate 鉻酸鉀	232-140-5	7789-00-6	Carcinogenic Mutagenic
35	Ammonium dichromate 重鉻酸銨	232-143-1	7789-09-5	Carcinogenic Mutagenic TRC
36	Potassium dichromate 重鉻酸鉀	231-906-6	7778-50-9	Carcinogenic Mutagenic TRC
37	Cobalt(II) sulphate 硫酸鈷(II)	233-334-2	10124-43-3	Carcinogenic TRC
38	Cobalt(II) dinitrate 硝酸鈷(II)	233-402-1	10141-05-6	Carcinogenic TRC
39	Cobalt(II) carbonate 碳酸鈷(II)	208-169-4	513-79-1	Carcinogenic TRC
40	Cobalt(II) diacetate 醋酸鈷(II)	200-755-8	71-48-7	Carcinogenic TRC
41	2-Methoxyethanol 2-甲氧基乙醇	203-713-7	109-86-4	TRC
42	2-Ethoxyethanol 2-乙氧基乙醇	203-804-1	110-80-5	TRC
43	Chromium trioxide 三氧化鉻	215-607-8	1333-82-0	Carcinogenic Mutagenic



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
44	Acids generated from chromium trioxide and their oligomers 由三氧化鉻和其他低聚合物形成的酸類： Chromic acid 鉻酸 Dichromic acid 重鉻酸 Oligomers of chromic acid and dichromic acid 鉻酸和重鉻酸的低聚物	231-801-5 236-881-5 --	7738-94-5 13530-68-2 --	Carcinogenic
45	2-Ethoxyethyl acetate (2-EEA) 乙酸-2-乙氧基乙酯	203-839-2	111-15-9	TRC
46	Strontium chromate 鉻酸鋇	232-142-6	7789-06-2	Carcinogenic
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) 鄰苯二甲酸二(C7-11 支鏈與直鏈)烷基酯	271-084-6	68515-42-4	TRC
48	Hydrazine 肼	206-114-9	7803-57-8 302-01-2	Carcinogenic
49	1-Methyl-2-pyrrolidone (NMP) 1-甲基吡咯烷酮	212-828-1	872-50-4	TRC
50	1,2,3-Trichloropropane 1,2,3-三氯丙烷	202-486-1	96-18-4	Carcinogenic TRC
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) 鄰苯二甲酸二(C6-8 支鏈)烷基酯，富 C7	276-158-1	71888-89-6	TRC
52	Dichromium tris(chromate) 鉻酸鉻	246-356-2	24613-89-6	Carcinogenic
53	Potassium hydroxyoctaoxodizincatedi-chromate 氫氧化鉻酸鋅鉀	234-329-8	11103-86-9	Carcinogenic
54	Pentazinc chromate octahydroxide C.I.顏料黃 36	256-418-0	49663-84-5	Carcinogenic
55	Formaldehyde, oligomeric reaction products with aniline (technical MDA) 甲醛和苯胺聚合物	500-036-1	25214-70-4	Carcinogenic
56	Aluminosilicate refractory ceramic fibres (RCF) 矽酸鋁,陶瓷耐火纖維**	--	--	Carcinogenic
57	Zirconia aluminosilicate refractory ceramic fibres (Zr-RCF) 矽酸鋁氧化鋯,陶瓷耐火纖維**	--	--	Carcinogenic
58	Bis(2-methoxyethyl)phthalate(DMEP) 鄰苯二甲酸二甲氧乙酯	204-212-6	117-82-8	TRC
59	2-Methoxyaniline(o-Anisidine) 鄰甲氧基苯胺	201-963-1	90-04-0	Carcinogenic
60	4-(1,1,3,3-Tetramethylbutyl)phenol, (4-tert-Octylphenol) 對特辛基苯酚	205-426-2	140-66-9	PBT, vPvB
61	1,2-Dichloroethane 1,2-二氯乙烷	203-458-1	107-06-2	Carcinogenic
62	Bis(2-methoxyethyl) ether 二甘醇二甲醚	203-924-4	111-96-6	TRC
63	Arsenic acid 砷酸	231-901-9	7778-39-4	Carcinogenic
64	Calcium arsenate 砷酸鈣	231-904-5	7778-44-1	Carcinogenic
65	Trilead diarsenate 砷酸鉛	222-979-5	3687-31-8	Carcinogenic TRC



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
66	N,N-Dimethylacetamide (DMAC) N,N-二甲基乙醯胺	204-826-4	127-19-5	TRC
67	4,4'-Methylenebis(2-chloroaniline) (MOCA) 4,4'-亞甲雙(2-氯苯胺)	202-918-9	101-14-4	Carcinogenic
68	Phenolphthalein 酚酞	201-004-7	77-09-8	Carcinogenic
69	Lead azide (Lead diazide) 疊氮化鉛	236-542-1	13424-46-9	TRC
70	Lead styphnate 收斂酸鉛	239-290-0	15245-44-0	TRC
71	Lead dipicrate 苦味酸鉛	229-335-2	6477-64-1	TRC
72	1,2-Bis(2-methoxyethoxy)ethane (TEGDME; Triglyme) 三乙二醇二甲醚	203-977-3	112-49-2	TRC
73	1,2-Dimethoxyethane; Ethylene glycol dimethyl ether (EGDME) 乙二醇二甲醚	203-794-9	110-71-4	TRC
74	Diboron trioxide 三氧化二硼	215-125-8	1303-86-2	TRC
75	Formamide 甲醯胺	200-842-0	75-12-7	TRC
76	Lead(II) bis(methanesulfonate) 甲基磺酸鉛	401-750-5	17570-76-2	TRC
77	1,3,5-Tris(oxiranylmethyl)-1,3,5-triazine- 2,4,6-(1H,3H,5H)-trione (TGIC) 異氰尿酸三縮水甘油酯	219-514-3	2451-62-9	Mutagenic
78	1,3,5-Tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine- 2,4,6-(1H,3H,5H)-trione (β-TGIC) β 型異氰尿酸三縮水甘油酯	423-400-0	59653-74-6	Mutagenic
79	4,4'-Bis(dimethylamino)benzophenone (Michler's ketone) 4,4'-二(N,N-二甲胺基) 二苯甲酮	202-027-5	90-94-8	Carcinogenic
80	N,N,N',N'-Tetramethyl-4,4'-methylenedianiline (Michler's base) 4,4'-亞甲基雙(N,N-二甲苯胺)	202-959-2	101-61-1	Carcinogenic
81	{4-[[4-Anilino-1-naphthyl][4-(dimethylamino)phenyl] methylene]cyclohexa-2,5-dien-1-ylidene} dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] {4-[[4-苯胺基-1-萘基] [4-(二甲胺基)苯基]亞甲基]環己-2,5-二烯-1-亞基}二甲 基氯化銨 (C.I. 鹼性藍 26)	219-943-6	2580-56-5	Carcinogenic
82	{4-[4,4'-Bis(dimethylamino) benzhydrylidene]cyclohexa - 2,5-dien-1-ylidene}dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] {4- [4,4'-雙(二甲胺基) 二苯亞甲基] 環己-2,5-二烯-1-亞 基} 二甲基氯化銨 (C.I. 鹼性紫 3)	208-953-6	548-62-9	Carcinogenic
83	4,4'-Bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] (4,4'-雙(二甲胺基)-4''-(甲基胺基) 三苯基醇)	209-218-2	561-41-1	Carcinogenic



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
84	α, α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4) [with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] α, α -雙[4-(二甲基胺基) 苯基]- 4-(苯基胺基)-1-萘甲醇 (C.I. 溶劑藍 4)	229-851-8	6786-83-0	Carcinogenic
85	Bis(pentabromophenyl) ether (DecaBDE) 十溴聯苯醚	214-604-9	1163-19-5	PBT, vPvB
86	Pentacosfluorotridecanoic acid 全氟十三酸	276-745-2	72629-94-8	vPvB
87	Tricosfluorododecanoic acid 全氟十二酸	206-203-2	307-55-1	vPvB
88	Henicosfluoroundecanoic acid 全氟十一酸	218-165-4	2058-94-8	vPvB
89	Heptacosfluorotetradecanoic acid 全氟十四酸	206-803-4	376-06-7	vPvB
90	4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues 辛基酚聚醚-9，包括界定明確的物質以及 UVCB 物質、聚合物及同系物	--	--	Equivalent Concern
91	4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof 支鏈及直鏈壬基酚-包括含有 9 個碳烷基鏈之所有獨立同分異構體及所有含有含直鏈或支鏈之 9 個碳烷基鏈 UVCB 物質	-	-	Equivalent Concern
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) 偶氮二甲醯胺	204-650-8	123-77-3	Equivalent Concern
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) 六氫鄰苯二甲酸酐	201-604-9, 236-086-3, 238-009-9	85-42-7, 13149-00-3, 14166-21-3	Equivalent Concern
94	Hexahydromethylphthalic anhydride (MHHPA-1) 甲基六氫苯酐 Hexahydro-4-methylphthalic anhydride (MHHPA-2) 4-甲基六氫苯酐 Hexahydro-1-methylphthalic anhydride (MHHPA-3) 甲基六氫化鄰苯二甲酸酐 Hexahydro-3-methylphthalic anhydride (MHHPA-4) 3-甲基六氫苯二甲酯酐	247-094-1, 243-072-0, 256-356-4, 260-566-1	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	Equivalent Concern
95	Methoxy acetic acid 甲氧基乙酸	210-894-6	625-45-6	TRC
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (PIPP) 1，2-苯二羧二戊酯（支鏈和直鏈）	284-032-2	84777-06-0	TRC
97	Diisopentyl phthalate (DIPP) 鄰苯二甲酸二異戊酯	210-088-4	605-50-5	TRC



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
98	<i>n</i> -Pentyl- <i>iso</i> -pentyl phthalate (PIPP) 鄰苯二甲酸正戊基異戊基酯	--	776297-69-9	TRC
99	1,2-Diethoxyethane 乙二醇二乙醚	211-076-1	629-14-1	TRC
100	N,N-Dimethylformamide; Dimethyl formamide (DMFA) N,N-二甲基甲醯胺	200-679-5	68-12-2	TRC
101	Dibutyltin dichloride (DBT) 二丁基二氯化錫	211-670-0	683-18-1	TRC
102	Acetic acid, lead salt, basic 鹼式乙酸鉛	257-175-3	51404-69-4	TRC
103	Basic lead carbonate (Trilead bis(carbonate) dihydroxide) 鹼式碳酸鉛	215-290-6	1319-46-6	TRC
104	Lead oxide sulfate (Basic lead sulfate) 鹼式硫酸鉛	234-853-7	12036-76-9	TRC
105	[Phthalato(2-)]dioxotrilead (Dibasic lead phthalate) 二鹽基鄰苯二甲酸鉛	273-688-5	69011-06-9	TRC
106	Dioxobis(stearato)trilead 雙(十八酸基)二氧代三鉛	235-702-8	12578-12-0	TRC
107	Fatty acids, C16-18, lead salts C16-18 脂肪酸鉛鹽	292-966-7	91031-62-8	TRC
108	Lead bis(tetrafluoroborate) 氟硼酸鉛	237-486-0	13814-96-5	TRC
109	Lead cyanidate 氨基氰鉛鹽	244-073-9	20837-86-9	TRC
110	Lead dinitrate 硝酸鉛	233-245-9	10099-74-8	TRC
111	Lead oxide (Lead monoxide) 一氧化鉛	215-267-0	1317-36-8	TRC
112	Lead tetroxide (Orange lead) 四氧化三鉛	215-235-6	1314-41-6	TRC
113	Lead titanium trioxide 鈦酸鉛	235-038-9	12060-00-3	TRC
114	Lead titanium zirconium oxide 鈦酸鉛鋯	235-727-4	12626-81-2	TRC
115	Pentalead tetraoxide sulphate 氧化鉛與硫酸鉛的複合物	235-067-7	12065-90-6	TRC
116	Pyrochlore, antimony lead yellow 顏料黃 41	232-382-1	8012-00-8	TRC
117	Silicic acid, barium salt, lead-doped 摻雜鉛的矽酸鋇	272-271-5	68784-75-8	TRC
118	Silicic acid, lead salt 矽酸鉛	234-363-3	11120-22-2	TRC
119	Sulfurous acid, lead salt, dibasic 亞硫酸鉛 (II)	263-467-1	62229-08-7	TRC
120	Tetraethyllead 四乙基鉛	201-075-4	78-00-2	TRC
121	Tetralead trioxide sulphate 三鹼式硫酸鉛	235-380-9	12202-17-4	TRC
122	Trilead dioxide phosphonate 磷酸氧化鉛	235-252-2	12141-20-7	TRC
123	Furan 呋喃	203-727-3	110-00-9	Carcinogenic
124	Propylene oxide; 1,2-Epoxypropane; Methyloxirane 1,2-環氧丙烷	200-879-2	75-56-9	Carcinogenic Mutagenic
125	Diethyl sulphate 硫酸二乙酯	200-589-6	64-67-5	Carcinogenic Mutagenic
126	Dimethyl sulphate 硫酸二甲酯	201-058-1	77-78-1	Carcinogenic
127	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine 3-乙基-2-甲基-2-(3-甲基丁基)噁唑烷	421-150-7	143860-04-2	TRC
128	Dinoseb 地樂酚	201-861-7	88-85-7	TRC



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
129	4,4'-Methylenedi- <i>o</i> -toluidine 4,4'-二氨基-3,3'-二甲基二苯 甲烷	212-658-8	838-88-0	Carcinogenic
130	4,4'-Oxydianiline and its salts 4,4'-二氨基二苯醚	202-977-0	101-80-4	Carcinogenic Mutagenic
131	4-Aminoazobenzene; 4-Phenylazoaniline 4-胺基偶氮苯	200-453-6	60-09-3	Carcinogenic
132	4-Methyl- <i>m</i> -phenylenediamine (2,4-Toluene-diamine) 2,4-二氨基甲苯	202-453-1	95-80-7	Carcinogenic
133	6-Methoxy- <i>m</i> -toluidine (<i>p</i> -cresidine) 2-甲氧基-5-甲基苯 胺	204-419-1	120-71-8	Carcinogenic
134	Biphenyl-4-ylamine ; 4-Aminobiphenyl 4-胺基聯苯	202-177-1	92-67-1	Carcinogenic
135	<i>o</i> -Aminoazotoluene 鄰氨基偶氮甲苯	202-591-2	97-56-3	Carcinogenic
136	<i>o</i> -Toluidine; 2-Aminotoluene 鄰甲苯胺	202-429-0	95-53-4	Carcinogenic
137	N-Methylacetamide N-甲基乙醯胺	201-182-6	79-16-3	TRC
138	1-Bromopropane; <i>n</i> -Propyl bromide 1-溴丙烷	203-445-0	106-94-5	TRC
139	Cadmium 鎘	231-152-8	7440-43-9	Carcinogenic Equivalent Concern
140	Cadmium oxide 氧化鎘	215-146-2	1306-19-0	Carcinogenic
141	Pentadecafluorooctanoic acid (PFOA) 全氟辛酸	206-397-9	335-67-1	TRC
142	Ammonium pentadecafluorootanoate (APFO) 全氟辛酸銨	223-320-4	3825-26-1	TRC
143	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well- defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] 支鏈及直鏈乙氧基壬基酚- 包括含有 9 個碳烷基鏈及所有含有含直鏈或支鏈之 9 個碳 烷基鏈 UVCB 物質、聚合物及同系物，包括獨立同分異構 物及複合物	--	--	Equivalent Concern
144	Dipentyl phthalate (DPP) 鄰苯二甲酸二戊酯	205-017-9	131-18-0	TRC
145	Cadmium sulphide 硫化鎘	215-147-8	1306-23-6	Carcinogenic Equivalent Concern
146	Lead di(acetate) 醋酸鉛	206-104-4	301-04-2	TRC
147	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'- biphenyl]-4-yl]azo] -5-hydroxy-6- (phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) C.I. 直接黑 38	217-710-3	1937-37-7	Carcinogenic
148	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4- aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) C.I. 直接紅 28	209-358-4	573-58-0	Carcinogenic



Test Conducted 測試內容 :

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
149	Trixylyl phosphate 磷酸三(二甲苯)酯	246-677-8	25155-23-1	TRC
150	Dihexyl phthalate (DnHP) 鄰苯二甲酸二正己酯	201-559-5	84-75-3	TRC
151	Imidazolidine-2-thione; 2-Imidazoline-2-thiol 亞乙基硫脲	202-506-9	96-45-7	TRC
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear 鄰苯二甲酸二己酯 (支鏈和直鏈)	271-093-5	68515-50-4	TRC
153	Cadmium chloride 氯化鎘	233-296-7	10108-64-2	Carcinogenic Equivalent Concern Mutagenic TRC
154	Sodium perborate; Perboric acid, sodium salt 過硼酸鈉	239-172-9, 234-390-0	--	TRC
155	Sodium peroxometaborate 過氧偏硼酸鈉	231-556-4	7632-04-4	TRC
156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) 2-(2'-羥基-3',5'-二-叔-戊基苯基)苯並三唑	247-384-8	25973-55-1	PBT, vPvB
157	2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) 2-(2'-羥基-3',5'-二-叔-丁基苯基)-苯並三唑	223-346-6	3846-71-7	PBT, vPvB
158	2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) 二正辛基-双(2-乙基己基巯基乙酸酯)錫	239-622-4	15571-58-1	TRC
159	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) 二正辛基-双(2-乙基己基巯基乙酸酯)錫和單辛基-三(2-乙基己基巯基乙酸酯)錫的反應物	--	--	TRC
160	Cadmium fluoride 氟化鎘	232-222-0	7790-79-6	Carcinogenic Equivalent Concern Mutagenic TRC
161	Cadmium sulphate 硫酸鎘	233-331-6	10124-36-4, 31119-53-6	Carcinogenic Equivalent Concern Mutagenic TRC
162	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate 鄰苯二甲酸二(C6-C10)烷基酯:(癸基,己基,辛基)酯與1,2-鄰苯二甲酸的混合物且鄰苯二甲酸二己酯含量≥0.3%	271-094-0 272-013-1	68515-51-5 68648-93-1	TRC
163	5-sec-Butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-Butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof] 卡拉花醛及其同分異構化合物	--	--	vPvB



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
164	Nitrobenzene 硝基苯	202-716-0	98-95-3	TRC
165	2,4-Di- <i>tert</i> -butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) 2,4-二-叔丁基-6-(5-氯代苯并三唑-2-基)苯酚	223-383-8	3864-99-1	vPvB
166	2-(2H-Benzotriazol-2-yl)-4-(<i>tert</i> -butyl)-6-(<i>sec</i> -butyl)phenol (UV-350) 2-(2H-苯並三唑-2-基)-4-(叔丁基)-6-(仲丁基)苯酚	253-037-1	36437-37-3	vPvB
167	1,3-Propanesultone 1,3-丙烷磺內酯	214-317-9	1120-71-4	Carcinogenic
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts 全氟壬酸及其鈉鹽和銨鹽	206-801-3	375-95-1 21049-39-8 4149-60-4	TRC, PBT
169	Benzo[def]chrysene (Benzo[a]pyrene) 苯並[def]屈(苯並[a]芘)	200-028-5	50-32-8	Carcinogenic Mutagenic TRC, PBT, vPvB
170	4,4'-isopropylidenediphenol (bisphenol A; BPA) 雙酚 A	201-245-8	80-05-7	TRC, EDP
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts 十九氟癸酸及其鈉鹽與銨鹽	206-400-3 221-470-5	335-76-2 3830-45-3 3108-42-7	TRC, PBT
172	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] 支鏈及直鏈庚基酚-包括含有 7 個碳烷基鏈之所有獨立同分異構體及所有含有含直鏈或支鏈之 7 個碳烷基鏈 UVCB 物質	-	-	TRC
173	<i>p</i> -(1,1-Dimethylpropyl)phenol 對-(1,1-二甲基丙基)酚	201-280-9	80-46-6	TRC
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS) 全氟己基磺酸及其鹽類	--	--	vPvB
175	Benz[a]anthracene 苯并[a]蒽	200-280-6	56-55-3	Carcinogenic PBT vPvB
176	Cadmium nitrate 硝酸鎘	233-710-6	10325-94-7	Carcinogenic Mutagenic STOT
177	Cadmium hydroxide 氫氧化鎘	244-168-5	21041-95-2	Carcinogenic Mutagenic STOT



Test Conducted 測試內容：

No.	Substance Name 物質名稱	EC Number	CAS Number	Reason for Inclusion 列入原因
178	Cadmium carbonate 碳酸鋇	208-168-9	513-78-0	Carcinogenic Mutagenic STOT
179	Chrysene 屈	205-923-4	218-01-9	Carcinogenic PBT vPvB
180	Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof 十二氯五環[12.2.1.16,9.02,13.05,10]十八碳-7,15-二烯 ("Dechlorane Plus"™)(包含任何反式與順式同分異構物或其他組成)	--	--	vPvB
181	Reaction products of 1,3,4-thiadiazolidine- 2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear] 1,3,4-噻二唑-2,5-二硫酮、甲醛與支鏈和直鏈 4-庚基苯酚的反應產物 (含有支鏈和直鏈 4-庚基苯酚重量比大於或等於 0.1%)	--	--	EDP
182	Octamethylcyclotetrasiloxane (D4) 八甲基環四矽氧烷	209-136-7	556-67-2	PBT, vPvB
183	Decamethylcyclopentasiloxane (D5) 十甲基環五矽氧烷	208-764-9	541-02-6	PBT, vPvB
184	Dodecamethylcyclohexasiloxane (D6) 十二甲基環六矽氧烷	208-762-8	540-97-6	PBT, vPvB
185	Lead 鉛	231-100-4	7439-92-1	TRC
186	Disodium octaborate 八硼酸二鈉	234-541-0	12008-41-2	TRC
187	Benzo[g,h,i]perylene 苯并[g,h,i]芘	205-883-8	191-24-2	PBT, vPvB
188	Terphenyl hydrogenated 氫化三聯苯	262-967-7	61788-32-7	vPvB
189	Ethylenediamine (EDA) 乙二胺	203-468-6	107-15-3	RSP
190	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride; TMA) 偏苯三酸酐	209-008-0	552-30-7	RSP
191	Dicyclohexyl phthalate (DCHP) 鄰苯二甲酸二環己酯	201-545-9	84-61-7	TRC, EDP



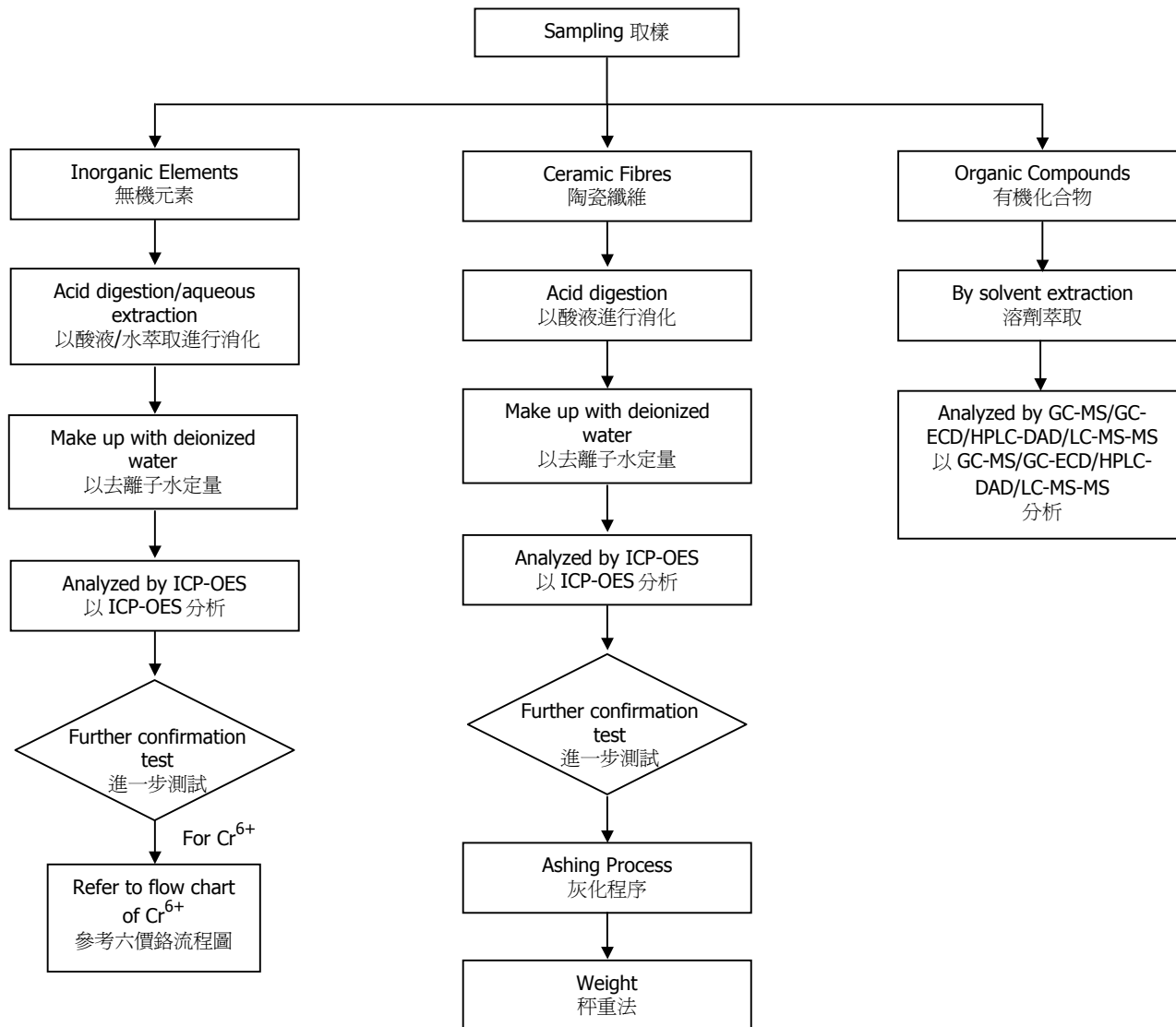
Test Conducted 測試內容 :

Remarks: Carcinogenic = 致癌性
備註 Mutagenic = 致誘變
TRC = Toxic for Reproduction 致生殖毒性
PBT = Persistent, Bioaccumulative and Toxic 持久性、生物累積性、毒性物質
vPvB = Very Persistent and Very Bioaccumulative 高持久性、生物累積性物質
EDP = Endocrine Disrupting Properties 內分泌破壞性
STOT = Specific Target Organ Toxicity after Repeated Exposure 重複暴露後致特定器官毒性
RSP = Respiratory sensitising properties 呼吸敏感性
Equivalent concern = 相同危害等級
** = The Dec 19, 2011 'Aluminosilicate Refractory Ceramic Fibres' and 'Zirconia Aluminosilicate Refractory Ceramic Fibres' listings open the scope of these items from the original listing (Jan 1, 2010). Although these two modified substances are counted as additions to the existing list, they are revisions of the original substance listings to ensure all hazardous versions are covered. As of Jun 18, 2012, these entries have been consolidated; there is now one entry for 'Aluminosilicate Refractory Ceramic Fibres' and one entry for 'Zirconia Aluminosilicate Refractory Ceramic Fibres'.
"矽酸鋁陶瓷耐火纖維"與"矽酸鋁氧化鋁陶瓷耐火纖維"於 2011 年 12 月 19 日從原來的清單中(2010 年 01 月 01 日)再被提出討論。雖然這兩個物質是以新增加項目的型態被計算於原有清單中，但是它們僅是修訂原有清單資訊以確保所有的危害形態都被包含於清單中。在 2012 年 06 月 18 日時，這些項目被合併起來，所以現在只有各一個"矽酸鋁陶瓷耐火纖維"與"矽酸鋁氧化鋁陶瓷耐火纖維"項目。



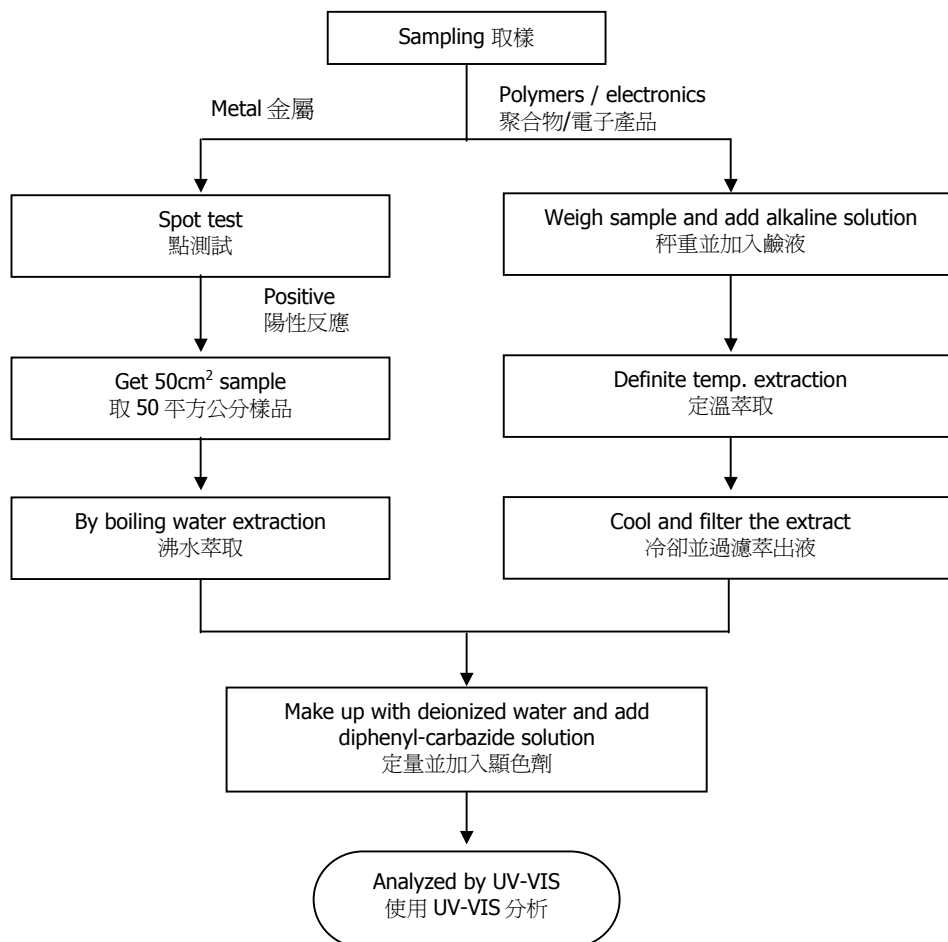
Test Conducted 測試內容：

Measurement Flowchart 測試流程圖：



Test Conducted 測試內容：

Test for Chromium (VI) Content 六價鉻測試流程圖

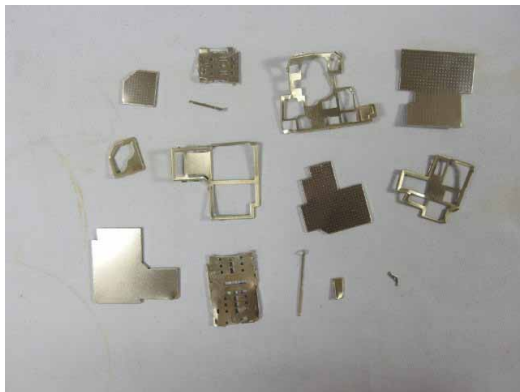


Submitted Samples



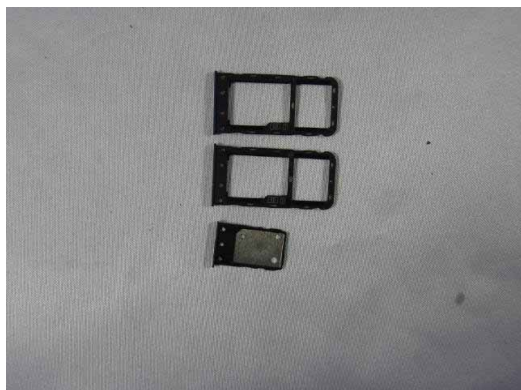
Tested Components

(1) Metal Part 金屬元件



Tested Components

(2) Non-Metal Part 非金屬元件



(3) Glass 玻璃



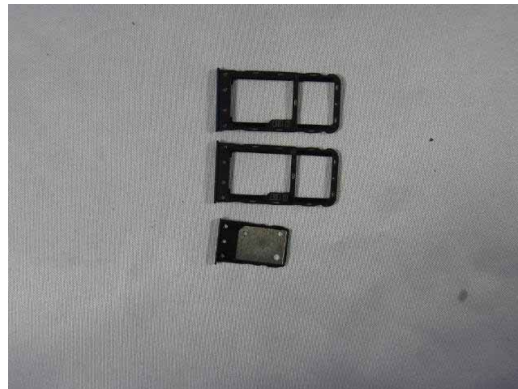
(4) Battery 電池



(5) PCB Assembly 电路板總成



(6) Metal and Non-metal Part 金屬和非金屬元件



End of Report

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