

## 綠色產品有害物質管理規範

### Management Regulation of Hazardous Substances for Green Products

本規範中之有害物質為依據國際法規與客戶要求進行管制，為適時更新相關要求，本公司隨時保有予以增修及列管之權限。

Comtrend reserves the right to amend this regulation at any time to comply with the international laws, regulations and customer demands on hazardous substances.

1.1 所有委外加工廠、成品供應商及零件供應商，應簽署並回傳本公司以下宣告書：

All out-sourced factories, finished product manufacturers and component suppliers should sign the declarations shown below, and return these declarations.

a. RD-4022\_綠色產品宣告書

RD-4022\_Declaration About Green Product

b. RD-4023\_無衝突礦產宣告書 (註 1)

RD-4023\_Declaration of Minerals Conflict-Free (Note 1)

c. RD-4024\_加州 65 法案宣告書

RD-4024\_Declaration About California Proposition 65

●註 1：供應商如產品含有之金 (Au)，鉭 (Ta)，鎢 (W)，錫 (Sn) 和鈷 (Co) 等金屬不符合「無衝突規範」，意即含有來自剛果民主共和國 (DRC)、盧安達 (Rwanda)、烏干達 (Uganda)、蒲隆地 (Burundi)、坦尚尼亞 (Tanzania)、肯亞 (Kenya) 之礦產，而不能提供無衝突礦產宣告書時，應改填寫 5.2 章節 d.項之 CMRT (Conflict Minerals Reporting Template, 衝突礦產報告模板) 表單。

Note1: If the products use “conflict minerals” such as Gold (Au), tantalum (Ta), tungsten (W), tin (Sn) and cobalt (Co) from the Central African Republic of the Congo, Rwanda, Uganda, Burundi, Tanzania and Kenya, without ‘Declaration of Minerals Conflict-Free’, the suppliers should fill out ‘Conflict Minerals Reporting Template’ (CMRT) in Section 5.2(d) instead.

1.2 所有本公司設計或委外設計、製造之產品及外購成品，其生產(含外購成品)所使用之材料、零件、組件、包裝材料、副資材及其它物料，該物料供應商應配合本公司綠色產品有害物質之政策，在康全料號正式承認前，應填寫並回傳本公司之調查文件如下：

The suppliers are expected to provide the relevant test reports on all materials, parts, components, packaging materials, sub-materials, etc. used in products, that are designed, manufactured, sold by Comtrend, or its contractors, as shown below, when requested by Comtrend, before a new part number can be assigned.

- a. RD-4025\_綠色產品有害物質管理調查表  
RD-4025\_Management Survey Form of Hazardous Substances for Green Products
- b. 管制等級為第一級之有害物質化驗報告  
Test reports on the substances classified at level 1
- c. 物質安全資料表 (MSDS) 或 材料成分表 (MCD)  
Material Safety Data Sheet (MSDS) or Material Composition Declaration (MCD)
- d. CMRT (Conflict Minerals Reporting Template, 衝突礦產報告模板) 表單 (註 2)  
Conflict Minerals Reporting Template (CMRT) (Note 2)

●註 2：請參考第 5.7 章節，當礦產來源不符合「無衝突礦產宣告書」條件時，供應商應改填寫本項表單並繳回本公司，最新版 CMRT 表單及冶煉廠名單請參考負責任礦產倡議組織 (RMI) 公告網址如下：

Note 2: Refer to section 5.7, if the sources of minerals do not meet the requirements of "Declaration of Minerals Conflict-Free", the supplier should fill out this form and return it. The latest version of CMRT and the smelter list are available on the Responsible Minerals Initiative (RMI) website: <https://www.responsiblemineralsinitiative.org/>

●以上綠色產品有害物質管理規範之相關文件，於系統之保存期限需 10 年以上。

The relevant documents of the Green product regulations on hazardous substances, mentioned above, must be kept for more than 10 years.

### 1.3 化驗報告相關文件說明

Description of related documents for test report

#### 1.3.1 實驗室資格

Laboratory Qualification

為確保化驗報告數據之品質與可靠性，分析實驗室需同時具備以下資格

To ensure testing data are of high quality and reliability, the laboratory must have the following qualifications.

- a. 實驗室需為第三方公正單位，通過 ISO17025 認證並取得認可證書，其核發證書之認證單位為 ILAC MRA (國際實驗室認證聯盟相互承認協議) 簽署會員國的實驗室認證機構。實驗室認證機構清單請參考 ILAC MRA 官網網址如下：  
A third-party laboratory that has been accredited to ISO/IEC 17025 by an accreditation body that is a signatory of ILAC MRA [International Laboratory Accreditation

Cooperation (ILAC) Mutual Recognition Arrangement (MRA)] is a must. A current list of all accreditation bodies that are signatories to the ILAC MRA is available from: <https://ilac.org/signatory-search/>

- b. 實驗室認可證書上之測試領域，需包含化驗報告之檢測項目。

The test field on the laboratory accreditation certificate must include the test items in the laboratory report.

### 1.3.2 送測部品拆解原則

Reduction and homogenizing of material

- a. 依據 EU RoHS 指令，電子電機產品中禁用物質濃度的定義是指每一均質材料中所含有的禁用物質含量。

As per the directive of the EU Restriction of Hazardous Substances (RoHS), the concentration of restricted Substances in Electrical and Electronic Equipment and Devices is by weight of homogenous material.

- b. 供應商需將供應部品拆解成不同的均質材料，送交符合資格的實驗室進行禁用物質的化驗。

Suppliers should separate products/components into different homogenous materials and send them to a certified laboratory for hazardous substances testing.

### 1.3.3 化驗報告中應需記載下列事項

The following items should be recorded in the test report

- a. 檢測實驗室名稱與負責人姓名

The name of the laboratory and the person in charge

- b. 樣品描述 (送測部件之名稱、型號等)

Product description (part number, serial number, etc.)

- c. 檢測日期

Test date

- d. 檢測方法與設備

Test method and the equipment used

- e. 檢測結果與方法偵測極限值

Test results and MDL (the Method Detection Limit)

## f. 檢測流程圖

Flow chart of the test

## g. 樣品圖片

Photos of the sample tested

## 1.3.4 檢測方式

Test Methods

有關 RoHS、包裝材料與無鹵產品相關禁用物質的檢測儀器與檢測方法如下  
Test methods for restricted substances are shown in the table below.

項次 Item	有害物質名稱 Hazardous substance	測試儀器 test instrument	測試方法 Test Methods
1	鉛 / 鉛化合物 Lead (Pb) / Lead compounds	ICP-AES、OES、MS AAS	IEC 62321
2	鎘 / 鎘化合物 Cadmium (Cd) / Cadmium compounds	ICP-AES、OES、MS AAS	IEC 62321
3	汞 / 汞化合物 Mercury (Hg) / Mercury compounds	ICP-AES、OES、MS AAS	IEC 62321
4	六價鉻化合物 Hexavalent Chromium (CrVI) compounds	UV-VIS	IEC 62321
5	多溴聯苯 Polybrominated biphenyls (PBBs)	GC/MS	IEC 62321
6	多溴聯苯醚 Polybrominated diphenylethers (PBDEs)	GC/MS	IEC 62321
7	鄰苯二甲酸二(2-乙基己基)酯 Bis (2-ethylhexyl) phthalate (DEHP)	GC/MS	IEC 62321
8	鄰苯二甲酸丁酯苯甲酯 Butyl benzyl phthalate (BBP)	GC/MS	IEC 62321
9	鄰苯二甲酸二丁酯 Dibutyl phthalate (DBP)	GC/MS	IEC 62321
10	鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP)	GC/MS	IEC 62321
11	鄰苯二甲酸酯類 Phthalate esters (PAEs)	GC/MS	CPSC-CH-C1001-09.4
12	全氟/多氟烷基物質 Per/Poly fluoro alkyl substances (PFAS)	GC/MS、LC/MS/MS	CEN/TS 15968:2010

13	氯 (Cl)	IC	EN14582:2016
14	溴 (Br)	IC	EN14582:2016

### 1.3.5 化驗報告有效期限

#### Effective period of the Test report

- a. 料號申請與更新化驗報告申請，申請時所檢附之化驗相關資料，需為報告生效日兩年內之化驗報告。

When applying for a part number or updating a test report, the effective dates on the attached test reports must be within two years of the application date.

- b. 審核通過，並於系統中正式入檔之化驗相關資料，其化驗報告於系統中的有效期限，為報告生效日三年內之化驗報告。

Test data that has been approved and officially documented in the system will stay effective for three years from the effective date shown on the test report.

### 1.3.6 化驗報告相關內容之補充與備註

#### Supplements and explanations to the relevant content of the test report

- a. 當本公司或客戶有額外物質加驗需求時，供應商需配合提供相關的化驗報告（如砷、PFOS、PFOA...等）。

When Comtrend or our customers request additional tests, the suppliers should provide relevant test reports, such as Arsenic, PFOS, PFOA, etc.

- b. 金屬、玻璃、陶瓷材料及電鍍液（含粉末），不包含其膏狀物（如錫膏、銀膏、陶瓷膏），可接受僅針對鉛、鎘、汞、六價鉻四項物質化驗的化驗報告。

For metals, glass, ceramics and plating solutions (including powder), excluding paste (such as tin paste, silver, ceramic paste), a heavy mineral test report showing only the contents of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr6+) is acceptable.

- c. 供應商需將供應部品拆解成不同的均質材料來進行化驗，如遇特殊狀況，則需先與本公司另行協商，經本公司確認並同意後，始可以特殊個案進行，若本規範所管制之有害物質，其化驗結果有數值產生（化驗結果非 N.D.），則該部品之化驗報告一律不接受樣品混測，且報告內容亦不得有混測等字樣說明。

The suppliers must separate products/components into different homogenous materials for hazardous substances testing. In case of unusual situation, Comtrend should be

contacted for consultation. Only with Comtrend's consent, can a special test be carried out. If hazardous substances listed in this specification have been detected (i.e., not N.D.), then mixed testing will not be accepted for that product/component, and the phrase such as "mixed test" cannot appear in the report.

#### 1.4 有害物質名稱一覽表

##### List of Hazardous Substances

所有供應商所提供之零件或產品，需完全符合下表(下表僅供參考，實際應以附錄一連結最新為準)列出有害物質與法規所要求之含量標準與規定，因各國法規與時俱進，法規所要求之含量標準與規定，需直接以該地區之最新公告為主，相關網址連結請參考附錄，若供應商所提供之部件，如之後有發生不符該地區法規最新法規標準之情事，供應商應於一個月內主動揭露相關資訊並通知本公司採購單位，如法規有須溯及既往者，應協助康全依法規規定採取必要措施，包含回收等產品等。

All suppliers must provide products/components that meet the requirements of hazardous substances laws and regulations of the subject area. (The table below is provided as a reference. Please check the websites listed in Appendix-1 for up-to-date information.) If a product/component was later found to be out of compliance with the latest local regulation, the supplier must notify our purchasing department with detailed information within one month, and assist Comtrend in taking measures to achieve compliance, including product/component recall, etc.

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 1 級 Level 1	1	鉛 / 鉛化合物 Lead (Pb) / Lead compounds	---	各式用途 (不包含 EU RoHS 所列出之排外項目)  ● 包裝材料另外還需要一併符合 5.5 章節包裝材料標準之要求。  ● 電池請直接參照 5.6 章節電池重金屬標準。	<1000ppm	2011/65/EU	立即限用 Promptly restrict
	2	鎘 / 鎘化合物 Cadmium (Cd) / Cadmium compounds	---		<100ppm		
	3	汞 / 汞化合物 Mercury (Hg) / Mercury compounds	---		<1000ppm		
	4	六價鉻化合物 Hexavalent Chromium (CrVI) compounds	---		<1000ppm		
	5	多溴聯苯 Polybrominated biphenyls (PBBs)	---		All purposes (Excludes exemptions listed in EU)		

6	多溴聯苯醚 Polybrominated diphenylethers (PBDEs)	---	RoHS)	<1000ppm		
7	鄰苯二甲酸二(2-乙基己基)酯 Bis (2-ethylhexyl) phthalate (DEHP)	---	● The packaging materials must also meet the requirements of the 5.5 packaging material standards.  ● For the battery, please directly refer to the battery heavy metal standard in Chapter 5.6.	<1000ppm	2015/863/EU	
8	鄰苯二甲酸丁酯苯甲酯 Butyl benzyl phthalate (BBP)	---		<1000ppm		
9	鄰苯二甲酸二丁酯 Dibutyl phthalate (DBP)	---		<1000ppm		
10	鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP)	---		<1000ppm		
11	溴 Bromine (Br)	---	僅針對有無鹵要求之產品與材料	<900ppm	IEC 61249-2-21 IPC-4101	立即限用 Promptly restrict
12	氯 Chlorine (Cl)	---	Only applicable to products and materials that meet halogen-free requirements.	<900ppm		
13	溴和氯濃度總和 Total concentration of Bromine (Br) and Chlorine (Cl)	---		<1500ppm		
14	溴 Bromine (Br)	---	僅針對有低鹵要求之產品與材料	<1000ppm	JEDEC JS709	立即限用 Promptly restrict
15	氯 Chlorine (Cl)	---	Only applicable to products and materials that meet low halogen requirements.	<1000ppm		

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	1	REACH 高關注有害物質清單 REACH SVHC (物質清單詳見附錄一 REACH SVHC 的網址) (Please refer to the URL of REACH SVHC in Appendix 1 for the substances list.)	---	各式用途；超過允許濃度之有害物質，供應商需在康全的綠色產品有害物質管理調查表中，揭露該管控物質在材料中所佔的百分比。  All purposes ; For hazardous substances exceeding the allowable concentration, the supplier shall disclose the percentage of the controlled substances in the material in the Comtrend Management Survey Form of Hazardous Substances for Green Products.	<1000ppm	EU REACH SVHC	立即禁用 Promptly restrict
	2	REACH 附錄 17 之 REACH Annex XVII (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	依該法令規範 According to the decree.  (詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1.)	依該法令規範 According to the decree.  (詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1.)	EU REACH Annex XVII	立即禁/限用 Promptly prohibited or restrict
	3	持久性有機污染物要求 POPs (物質清單詳見附錄一 POPs 的網址)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs	立即禁用 Promptly prohibited



	(Please refer to the URL of POPs in Appendix 1 for the substances list.)					
4	加拿大禁止特定有毒物質條例 (SOR/2012-285) SOR/2012-28 (物質清單詳見附錄一 SOR/2012-28 的網址) (Please refer to the URL of SOR/2012-28 in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	CEPA SOR/2012-285	立即禁用 Promptly prohibited

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	5	美國加州第 65 號法案 CP65 (物質清單詳見附錄一 CP65 的網址) (Please refer to the URL of CP65 in Appendix 1 for the substances list.)	---	有 CP65 法規要求之產品與材料；若材料中含有 CP65 所控管之有害物質，供應商需在康全的綠色產品有害物質管理調查表中，揭露該管控制物質。  Only applicable to products and materials that meet CP65 requirements.; If the material contains CP65 hazardous substances, the supplier shall disclose the controlled substances in the material in the Comtrend Management Survey Form of Hazardous Substances for Green Products.	依該法令規範 According to the decree.  (詳見附錄一 CP65 的網址) (Please refer to the URL of CP65 in Appendix 1.)	CP65	立即限用 Promptly restrict

6	放射性物質 Radioactive Substances  (物質清單詳見附錄二) (Please refer to Annex 2 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	IEC 62474 Japan Nuclear material reactors, JGPSSI	立即禁用 Promptly prohibited
7	臭氧層破壞物質 Ozone Depleting Substances (ODS)  (物質清單詳見附錄三) (Please refer to Annex 3 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	IEC 62474 Montreal Protocol, AnnexA, B, C USA 1990 Clean Air Act	立即禁用 Promptly prohibited
8	氟化溫室氣體 Fluorinated Greenhouse Gases (PFC, SF6, HFC)  (物質清單詳見附錄四) (Please refer to Annex 4 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	IEC 62474 EU REGULATION (EU) No 517/2014 on fluorinated greenhouse gases	立即禁用 Promptly prohibited
9	2,4,6-參(三級丁基)苯酚 2,4,6-TTBP	732-26-3	各式用途，如油品與潤滑油中添加劑 All purposes, e.g. additives in oil and lubricating oil.	<3000ppm	TSCA Section 6(h)	立即禁用 Promptly prohibited
10	五氯苯硫酚 PCTP	133-49-3	各式用途，如橡膠製造 All purposes, e.g. rubber manufacturing.	<10000ppm	TSCA Section 6(h)	立即禁用 Promptly prohibited
11	六氯丁二烯 HCBd	87-68-3	各式用途，如橡膠製造與變壓器油 All purposes, e.g. rubber manufacturing and transformer oil.	不得檢出 Not detected	TSCA Section 6(h) EU POPs	立即禁用 Promptly prohibited

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	12	十溴二苯醚 DecaBDE	1163-19-5	各式用途，如塑膠與建築材的阻燃劑 All purposes, e.g. flame retardant for plastics and building materials.	不得檢出 Not detected	TSCA Section 6(h) EU POPs EU REACH SVHC IEC 62474	立即禁用 Promptly prohibited
	13	異丙基化磷酸三苯酯 (3:1) PIP (3:1)	68937-41-7	各式用途，如用於塑膠阻燃 All purposes	不得檢出 Not detected	TSCA Section 6(h)	立即禁用 Promptly prohibited
	14	三氯沙 Triclosan	3380-34-5	各式用途 All purposes	< 10ppm	Norway's PoHS	立即限用 Promptly restrict
	15	中鏈氯化石蠟 Medium Chain chlorinated paraffins (MCCP,C14~C17)  (物質清單詳見附錄一 REACH SVHC 的網址)  (Please refer to the URL of REACH SVHC in Appendix 1 for the substances list.)	---	各式用途 All purposes	< 1000ppm	Norway's PoHS EU REACH SVHC	立即限用 Promptly restrict
	16	二甲苯麝香 Musk xylene	81-15-2	各式用途 All purposes	< 500ppm	Norway's PoHS EU REACH SVHC	立即限用 Promptly restrict
	17	雙酚 A (Bisphenol-A)	80-05-7	各式用途 All purposes	< 50ppm	Norway's PoHS EU REACH Annex XVII EU REACH SVHC	立即限用 Promptly restrict
	18	六溴環十二烷 (HBCDD)以及所有主要的非對映異構體 Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified  (物質清單詳見附錄一 POPs & REACH SVHC 的網址)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs EU REACH SVHC Norway's PoHS	立即禁用 Promptly prohibited

	(Please refer to the URL of POPs & REACH SVHC in Appendix 1 for the substances list.)					
19	五氯酚及其鹽類和酯類 Pentachlorophenol (PCP) and its salts and esters  (物質清單詳見附錄一 POPs 的網址)  (Please refer to the URL of POPs in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs Norway's PoHS	立即禁用 Promptly prohibited

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	20	全氟辛酸 (PFOA)、其鹽類和 PFOA 相關物質 perfluorooctanoic acid (PFOA), its salts and PFOA-related substances  (物質清單詳見附錄一 POPs & REACH SVHC 的網址)  (Please refer to the URL of POPs & REACH SVHC in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs Norway's PoHS EU REACH SVHC	立即禁用 Promptly prohibited
	21	砷及其化合物 Arsenic and its compounds  (物質清單詳見附錄一 REACH Annex XVII 的網址)  (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途；除半導體和銅箔(印刷電路板) All purposes ; Except for semiconductors and copper foil (PCB).	< 1000ppm	Norway's PoHS EU REACH Annex XVII	立即禁用 Promptly prohibited
	22	多氯三聯苯 Polychlorinated terphenyls (PCTs)	61788-33-8	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII IEC 62474	立即禁用 Promptly prohibited

23	苯 Benzene	71-43-2	各式用途 All purposes	< 1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
24	石棉 Asbestos	1332-21-4	各式用途 All purposes	不得檢出 Not detected	IEC 62474 TSCA Switzerland ChemRRV	立即禁用 Promptly prohibited
25	石棉纖維 Asbestos fibres  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
26	參氣丙啶基氧化磷 Tris(aziridinyl) phosphin oxide	545-55-1	紡織成品 Textile articles	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
27	多溴聯苯、多溴聯苯 Polybromobiphenyls, Polybrominatedbiphenyls (PBB)  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	紡織成品 Textile articles	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	28	2-萘胺及其鹽類 2-naphthylamine and its salts  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	29	聯苯胺及其鹽類 Benzidine and its salts  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	30	4-硝基聯苯 4-Nitrobiphenyl	92-93-3	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	31	4-胺基聯苯及其鹽類 4-Aminobiphenyl xenylamine and its salts	92-67-1	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	32	碳酸鉛 Lead carbonates  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	塗料 Paint	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
	33	硫酸鉛 Lead sulphates	---	塗料 Paint	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited

		(物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)					
34		有機錫化合物 Organostannic compounds  (物質清單詳見附錄五與附錄一 REACH Annex XVII 的網址) (Please refer to Appendix 5 & the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	<1000ppm	EU REACH Annex XVII IEC 62474	立即限用 Promptly restrict
35		二- $\mu$ -氧代-二-正丁基錫羧基硼烷 / 二丁基硼酸氫錫 C8H19BO3Sn (DBB) Di- $\mu$ -oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate C8H19BO3Sn (DBB)	75113-37-0	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	36	單甲基四氯二苯基甲烷 商品名：Ugilec 141 Monomethyl — tetrachlorodiphenyl methane Trade name: Ugilec 141	76253-60-6	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
	37	單甲基二氯二苯基甲烷 商品名：Ugilec 121、Ugilec 21 Monomethyl-dichloro- diphenyl methane Trade name: Ugilec 121, Ugilec 21	81161-70-8	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII IEC 62474	立即禁用 Promptly prohibited
	38	單甲基二溴二苯基甲烷	99688-47-8	各式用途	不得檢出	EU REACH Annex	立即禁用

	商品名：DBBT Monomethyl-dibromo- diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT		All purposes	Not detected	XVII	Promptly prohibited
39	鎳及其化合物 Nickel and its compounds  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	直接與皮膚接觸之物品 The articles coming into direct and prolonged contact with the skin.	< 0.5 µg/cm <sup>2</sup> /week	EU REACH Annex XVII	立即限用 Promptly restrict
40	致癌物類別物質 Carcinogen category  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
41	誘導基因突變類別物質 Mutagen category  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
42	生殖毒物類別 Reproductive toxicant category  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of	---	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited



		REACH Annex XVII in Appendix 1 for the substances list.)					
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等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	43	木餾油、煤焦油、焦油以及相關 碳氫化學品 Creosote oil, Coal tar, Tar acids and anthracene substances (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
	44	三氯甲烷 Chloroform	67-66-3	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	45	1,1,2-三氯乙烷 1,1,2-Trichloroethane	79-00-5	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	46	1,1,2,2-四氯乙烷 1,1,2,2-Tetrachloroethane	79-34-5	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	47	1,1,1,2-四氯乙烷 1,1,1,2-Tetrachloroethane	630-20-6	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	48	五氯乙烷 Pentachloroethane	76-01-7	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	49	1,1-二氯乙烯 1,1-Dichloroethene	75-35-4	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	50	六氯乙烷 Hexachloroethane	67-72-1	各式用途 All purposes	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited

51	偶氮著色劑 Azocolourants and Azodyes  (物質清單詳見附錄一 REACH Annex XVII 的網址)  (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	紡織與皮革製品 Textile and leather articles	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
52	八溴聯苯醚 Diphenylether, octabromo derivative C12H2Br8O	32536-52-0	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
53	壬基酚聚氧乙烯醚 Nonylphenol ethoxylates (C2H4O)nC15H24O  (物質清單詳見附錄一 REACH Annex XVII & REACH SVHC 的網址)  (Please refer to the URL of REACH Annex XVII & REACH SVHC in Appendix 1 for the substances list.)	---	各式用途 All purposes	<1000ppm	EU REACH Annex XVII EU REACH SVHC	立即限用 Promptly restrict
			紡織成品 Textile articles	<100ppm	EU REACH Annex XVII	立即限用 Promptly restrict
54	甲苯 Toluene	108-88-3	黏著劑與噴漆 Adhesives and spray paints	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	55	三氯苯 Trichlorobenzene	120-82-1	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	56	多環芳香族碳氫化合物 Polycyclic-aromatic hydrocarbons (PAH)  (物質清單詳見附錄一 REACH Annex XVII & POPs 的網址)	192-97-2	長期或短期重複直接接觸人體皮膚或口腔之橡膠或塑膠部件 The rubber and plastic components that come into direct as well as	<1ppm	EU REACH Annex XVII	立即限用 Promptly restrict
			205-82-3				
			56-55-3				
			218-01-9				
53-70-3							

	(Please refer to the URL of REACH Annex XVII & POPs in Appendix 1 for the substances list.)		prolonged or short-term repetitive contact with the human skin or the oral cavity.			
		193-39-5				
		50-32-8	各式用途	不得檢出	EU POPs	立即禁用
		207-08-9	All purposes	Not detected		Promptly prohibited
		205-99-2				
57	鄰苯二甲酸鹽 The following phthalates  (物質清單詳見附錄一 REACH Annex XVII & REACH SVHC 的網址) (Please refer to the URL of REACH Annex XVII & REACH SVHC in Appendix 1 for the substances list.)	---	塑化材料；連接器、線材除外 Plasticized material; except for connectors and wires.	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
58	二乙二醇單甲醚 2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3	塗料、除漆劑、清洗劑、自發光乳劑、地板密封劑 Paints, paint strippers, cleaning agents, self-shining emulsions or floor sealants	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
59	二苯基甲烷二異氰酸酯 Methylenediphenyl diisocyanate (MDI) including the following specific isomers  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
60	環己烷 Cyclohexane	110-82-7	氯丁橡膠基接觸型黏合劑 neoprene-based contact adhesives	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict

	61	二氯甲烷 Dichloromethane / Methylenechloride(CH <sub>2</sub> Cl <sub>2</sub> )	75-09-2	除漆劑 Paint strippers	<1000ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	62	富馬酸二甲酯 Dimethyl fumarate (DMFu)	624-49-7	各式用途 All purposes	<0.1ppm	EU REACH Annex XVII	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	63	新癸酸苯汞 Phenylmercury neodecanoate  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	各式用途 All purposes	<100ppm	EU REACH Annex XVII	立即限用 Promptly restrict
	64	無機銨鹽 Inorganic ammonium salts  (物質清單詳見附錄一 REACH Annex XVII 的網址) (Please refer to the URL of REACH Annex XVII in Appendix 1 for the substances list.)	---	纖維素的絕緣混合物與 絕緣成品 cellulose insulation mixtures and insulation articles	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
	65	全氟辛酸銨 Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	各式用途 All purposes	不得檢出 Not detected	EU POPs EU REACH SVHC	立即禁用 Promptly prohibited
	66	全氟辛烷磺酸 Perfluorooctane sulfonates (PFOS)  (物質清單詳見附錄六) (Please refer to Annex 6 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs IEC 62474	立即禁用 Promptly prohibited
	67	短鏈氯化石蠟包 Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs EU REACH SVHC IEC 62474	立即禁用 Promptly prohibited

	(物質清單詳見附錄七) (Please refer to Annex 7 for the substances list.)					
68	4-氨基偶氮苯 4-amino azobenzene	60-09-3	紡織與皮革製品 Textile and leather articles	不得檢出 Not detected	EU REACH Annex XVII	立即禁用 Promptly prohibited
			各式用途 All purposes	<1000ppm	EU REACH SVHC	立即限用 Promptly restrict
69	高氯酸鹽 Perchlorates (物質清單詳見附錄八) (Please refer to Annex 8 for the substances list.)	---	各式用途 (僅針對有 CP65 法規要求之產品與材料) All purposes (Only applicable to products and materials that meet the requirements of CP65 regulations.)	不得檢出 Not detected	USA California Perchlorate Contamination Prevention Act of 2003 AB 826 IEC 62474	立即禁用 Promptly prohibited
70	多氯萘 Polychlorinated naphthalenes (物質清單詳見附錄九) (Please refer to Annex 9 for the substances list.)	---	各式用途 All purposes	不得檢出 Not detected	EU POPs Japan Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. IEC 62474	立即禁用 Promptly prohibited

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	71	溴化阻燃劑 (PBBs、PBDEs 與 HBCDD 除外) Brominated flame retardants (other than PBBs, PBDEs, and HBCDD) (物質清單詳見附錄十) (Please refer to Annex 10 for the substances list.)	---	僅針對有無鹵要求之產品與材料 Only applicable to products and materials that meet halogen-free requirements.	<900ppm	IEC 61249-2-21 IPC-4101 IEC 62474	立即限用 Promptly restrict
				僅針對有低鹵要求之產品與材料 Only applicable to products and materials	<1000ppm	JEDEC JS709 IEC 62474	立即限用 Promptly restrict

			that meet low halogen requirements.			
72	氯化阻燃劑 (CFR) Chlorinated Flame Retardants (CFR)  (物質清單詳見附錄十一) (Please refer to Annex 11 for the substances list.)	---	僅針對有無鹵要求之產品與材料 Only applicable to products and materials that meet halogen-free requirements.	<900ppm	IEC 61249-2-21 IPC-4101 IEC 62474	立即限用 Promptly restrict
			僅針對有低鹵要求之產品與材料 Only applicable to products and materials that meet low halogen requirements.	<1000ppm	JEDEC JS709 IEC 62474	立即限用 Promptly restrict
73	甲醛 Formaldehyde	50-00-0	木製產品 Wooden articles	<0.1ppm	IEC 62474 TSCA	立即限用 Promptly restrict
			各式用途 All purposes	<75ppm		立即限用 Promptly restrict
74	植物材質(木材,紙張,和其他植物材料產品) Plant based materials (wood, paper and other plant-based Products)	---	禁止使用任何非法開採之木製材料或其它野生植物材料 It is prohibited to use any illegally mined wooden materials or other wild plant materials.	不得檢出 Not detected	Lacey Act	立即禁用 Promptly prohibited
75	BBP、DBP、DEHP、DIBP 的總和 Total sum of BBP, DBP, DEHP, DIBP	---	各式用途 All purposes	<1000ppm	Korea Safety Law for Eletronics	立即限用 Promptly restrict
76	礦物油 Mineral oil	---	包裝材料、紙類、油墨 Packaging materials, paper, ink	不得檢出 Not detected	French Environmental Law (D543-45-1)	立即禁用 Promptly prohibited
77	含磷脫脂劑和皮膜液於金屬外殼前處理 Phosphorous detergent or/and phosphorous passivation agent	---	產品外部的金屬部件 Metal parts on the outside of the product.	不得檢出 Not detected	Comtrend Policy	立即禁用 Promptly prohibited

		used for metal surface pretreatment					
	78	1,1'-[乙烷-1,2-二基雙氧基]雙[2,4,6-三溴苯] 1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene]	37853-59-1	各式用途 All purposes	<1000ppm	EU REACH SVHC IEC 62474	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第2級 Level 2	79	2,2',6,6'-四溴-4,4'-異亞丙基二苯酚 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	79-94-7	各式用途 All purposes	<1000ppm	EU REACH SVHC IEC 62474	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第4級 Level 4	1	高氯酸鹽 Perchlorates (物質清單詳見附錄八) (Please refer to Annex 8 for the substances list.)	---	各式用途，如硬幣、電池 All purposes, e.g. coins, batteries.	0.006ppm 以上需揭露使用資訊 More than 0.006 ppm requires disclosure of usage information.		立即執行 Promptly execute
	2	溴化阻燃劑 (PBBs、PBDEs 與 HBCDD 除外) Brominated flame retardants (other than PBBs, PBDEs, and HBCDD) (物質清單詳見附錄十) (Please refer to Annex 10 for the substances list.)	---	各式用途，如電路板、模具化合物、電纜、打印機定影組件 All purposes, e.g. PCB, molding compound, cables, printer components.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	3	氯化阻燃劑 (CFR) Chlorinated Flame Retardants (CFR)	---	各式用途，如電氣和機械部件 All purposes, e.g. Electrical and	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure		立即執行 Promptly execute

		(物質清單詳見附錄十一) (Please refer to Annex 11 for the substances list.)		mechanical parts.	of usage information.		
4		鹵化阻燃劑 Halogenated Flame Retardants (物質清單詳見附錄十二) (Please refer to Annex 12 for the substances list.)	---	各式用途，如塑料製品 All purposes, e.g. plastic products.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	IEC 62474	立即執行 Promptly execute
5		磷系阻燃劑 Phosphorus Flame Retardants (物質清單詳見附錄十三) (Please refer to Annex 13 for the substances list.)	---	各式用途，如塑料製品 All purposes, e.g. plastic products.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
6		聚氯乙烯 Poly Vinyl Chloride Polymer (PVC)	9002-86-2	各式用途，如電線和電纜的護套 All purposes, e.g. wire and cable sheath.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
7		1,2,3-三氯苯 1,2,3-Trichlorobenzene	87-61-6	溶劑、染料 Solvents, Dyes	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
8		2,3-二溴-1-丙醇 2,3-Dibromo-1-propanol	96-13-9	阻燃劑 Flame retardant	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第4級 Level 4	9	甲乙酮肟; 2-丁酮肟 2-Butanone oxime	96-29-7	油漆、清漆、塗料、木材防腐劑、粘合劑、矽	1000ppm 以上需揭露使用資訊		立即執行 Promptly



			酮密封劑、印刷油墨、 防腐劑、聚氨酯聚合物 Paints, Varnishes, Coatings, Wood preservatives, Adhesives, Silicone sealants, Printing inks, Preservatives, Polyurethane polymers	More than 1000 ppm requires disclosure of usage information.		execute
10	2-乙基己基-四溴苯甲酸 (TBB) 2-Ethylhexyl-2,3,4,5- tetrabromobenzoate (TBB)	183658-27-7	聚氨酯泡沫塑料中的阻 燃劑 Flame retardant for plastic in polyurethane foam.	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
11	鈹青銅 Beryllium copper	---	連接器、彈簧、EMI 墊 片 Connectors, Springs, EMI gaskets	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
12	純鈹 Beryllium metal	---	散熱應用、齒輪 Cooling applications, Gears	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
13	双(乙基己基)四溴鄰苯二甲酸酯 Bis(2-ethylhexyl) tetrabromophthalate (TBPH or BEHTBP)	26040-51-7	PU 泡沫中塑料的阻燃 劑、PVC 中的增塑劑、 粘合劑 Flame retardant for plastic in PU foam, Plasticizer in PVC, Adhesive	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
14	鈷 Cobalt metal	7440-48-4	電鍍 Plating	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage		立即執行 Promptly execute

					information.		
15	硫酸鈷; 單水合硫酸鈷; 七水合硫酸鈷 Cobalt sulfate, anhydrous; monohydrate; heptahydrate)	13455-64-0; 10026-24-1	玻璃和瓷器顏料、蓄電池、電鍍浴、交感油墨 Pigments for glass and porcelain, Batteries, Electroplating baths, Sympathetic inks	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute	
16	三價鉻及其化合物 Chromium(III) compounds	---	防腐塗料、塑料中的顏料 Anticorrosive coatings, Pigments in plastics	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute	

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 4 級 Level 4	17	氰化物 Cyanides	151-50-8	醫學指示劑和試劑 Medical indicators and reagents	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	18	雙(氫化牛油烷基)二甲基氯化銨 DHTDMAC	61789-80-8	柔軟劑 Softener	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	19	2,2-雙(溴甲基)-1,3-丙二醇 Dibromoneopentyl-glycol	3296-90-0	不飽和聚酯樹脂、模塑製品、PU 泡沫中塑料的阻燃劑 Unsaturated polyester resin, Molded products, Flame retardant for plastic in PU foam	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	20	三氧化二鎳 Dinickel trioxide	1314-06-3	所有用途 All purposes	1000ppm 以上需揭露使用資訊		立即執行 Promptly

				More than 1000 ppm requires disclosure of usage information.	execute
21	雙(氫化牛油烷基) 二甲基氯化銨 DHTDMAC	61789-80-8	柔軟劑 Softener	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
22	雙硬酯酰基二甲基氯化銨 DODMAC(DSDMAC)	107-64-2	柔軟劑 Softener	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
23	雙牛油烷基二甲基氯化銨 DTDMAC	68783-78-8	柔軟劑 Softener	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
24	己二醇二丙烯酸酯 Hexamethylene diacrylate	13048-33-4	塗料、油墨、粘劑與用於樹脂、橡膠、聚合物的聚合過程。 Coatings, Inks, Adhesives and used in the polymerization process of resins, rubbers and polymers.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
25	磷化銦 Indium phosphide	22398-80-7	半導體 Semiconductor	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 4 級 Level 4	26	異氰酸鹽 Isocyanates	---	所有用途 All purposes	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	27	長鏈氯化石蠟(LCCP,C18~C30) Long Chain Chlorinated paraffins (LCCP,C18~C30)	---	軟化劑、阻燃劑、絕緣密封劑、膠水、油漆、金屬加工潤滑劑、皮革保鮮、橡膠 Softener, Flame retardant, Insulating sealant, Glue, paint, Metal processing lubricant, Leather preservation, Rubber	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	28	N,N'-二鄰甲苯胍 N, N'-di-o-tolylguanidine (DOTG)	97-39-2	加速器 Accelerator	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	29	二甲基甲醯胺 N,N-Dimethylformamide (DMF)	68-12-2	電解電容 Electrolytic capacitor	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	30	正丁基縮水甘油醚 n-Butyl glycidyl ether	2426-08-6	粘合劑、密封劑、填料、樹脂的環氧樹脂配方 Adhesives, Sealants, Fillers, Resin epoxy resin formula	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	31	正己烷 n-Hexane	110-54-3	清潔劑、快乾膠、橡膠水泥	1000ppm 以上需揭露使用資訊		立即執行 Promptly

				Cleaner, Quick-drying glue, Rubber cement	More than 1000 ppm requires disclosure of usage information.		execute
32	胺磺酸鎳 Nickel sulfamate	13770-89-3	電鍍鎳 Electroplated nickel		1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
33	硫酸鎳 (六水合硫酸鎳; 七水合硫酸鎳) Nickel sulphate (anhydrous; hexahydrate; heptahydrate)	7786-81-4	電鍍鎳 Electroplated nickel		1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
34	四丁基錫 Tetrabutyltin (TTBT)	1461-25-2	PVC 穩定劑 PVC stabilizer		1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 4 級 Level 4	35	甲苯二異氰酸酯 Toluene diisocyanate	26471-62-5	用於生產聚氨酯 Used in the production of polyurethane.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	36	氯乙烯 Vinyl Chloride	75-01-4	用於生產 PVC Used in the production of PVC.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute

37	合成無機礦質纖維 Synthetic mineral fibers	---	絕緣材料 Insulation Materials	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
38	全氟羧酸及相關化合物 Perfluoro carboxylic acid and relative compounds	---	表面活性劑 Surfactant	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
39	其他有機溴化合物 Other brominated organic compounds	---	各式用途（除有鹵產品阻燃和 PVC 用於電氣和機械部件） All purposes: Except for Halogenated Flame product, PVC in electrical and mechanical parts	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
40	其他有機氯化合物 Other chlorinated organic compounds	---	各式用途（除有鹵產品阻燃和 PVC 用於電氣和機械部件） All purposes: Except for Halogenated Flame product, PVC in electrical and mechanical parts	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
41	銻(Sb)及其化合物 Antimony and its compounds	---	各式用途；除陶瓷材料、金屬合金、ACF、燈管中玻璃、抗靜電劑外 All purposes ; Except for ceramic materials, metal alloys, ACF, glass in lamp tubes, and antistatic agents.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.	立即執行 Promptly execute
42	鉍及其化合物 Bismuth and its compounds	---	無鉛焊料 Lead-free solder	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure	立即執行 Promptly execute

					of usage information.		
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等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 4 級 Level 4	43	銅及其化合物 Copper and its compounds	---	防銹表面處理導體印花漿 Anti-rust surface treatment conductor printing paste.	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	44	鎂及其化合物 Magnesium and its compounds	---	表面塗層、電腦外殼 Surface coating, Computer case	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	45	錳及其化合物 Manganese and its compounds	---	合金 Alloy	1000ppm 以上需揭露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	46	鈀及其化合物 Palladium and its compounds	---	部件焊鍍與化學鍍 Parts welding and electroless plating.	意圖添加使用需揭露使用資訊 requires disclosure of usage information for intentional add		立即執行 Promptly execute
	47	鋅及其化合物 Zinc and its compounds	---	電鍍、表面處理 Electroplating, Surface treatment	意圖添加使用需揭露使用資訊 requires disclosure of usage information for intentional add		立即執行 Promptly execute
	48	銀及其化合物 Silver and its compounds	---	電鍍、電接觸材料、感光材料 Electroplating, Electrical	意圖添加使用需揭露使用資訊 requires disclosure		立即執行 Promptly execute

				contact materials, Photosensitive materials	of usage information for intentional add		
49	硒及其化合物 Selenium and its compounds	---		感光體、顏料、油墨、 氧化劑、半導體材料、 光接收元件、光電池 Photoreceptors, Pigments, Inks, Oxidants, Semiconductor materials, Light receiving elements, Photovoltaic cells	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
50	人造玻璃纖維含有超過重量 18% 的金屬(鈉, 鉀, 鈣, 鎂, 鋇)氧化物 Man-made vitreous (silicate) fibres with oxide of metal of sodium, potassium, calcium, magnesium and barium content >18% by mass	---		高溫應用中絕緣材料 Insulating materials in high temperature applications.	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 4 級 Level 4	51	預期在正常或可預見使用下被 釋出的奈米材質 Nanomaterials intended to be released under normal or reasonably foreseeable conditions of use	---	軟管、油墨、油漆、橡 膠基膠粘劑、密封膠 Hose, Ink, Paint, Rubber-based adhesive, Sealant	1000ppm 以上需揭 露使用資訊 More than 1000 ppm requires disclosure of usage information.		立即執行 Promptly execute
	52	紅/黃 磷 Red/Yellow phosphorus	7723-14-0	各式用途 All purposes	需揭露使用資訊 Disclose usage information.		立即執行 Promptly execute



## 1.5 包裝材料標準

## Standards for Packaging Materials

包裝材料除需滿足 5.4 章節中的各項規定與有害物質標準外，其有害物質化驗報告另需符合下表之標準。

In addition to the packaging materials that meet the requirements of Chapter 5.4 and the hazardous material standards, the hazardous substance test report must also meet the standards in the following table.

## 1.5.1 包裝材料有害物質標準一覽表

## List of Hazardous Substance Standards for Packaging Materials

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 1 級 Level 1	1	重金屬 (鉛、鎘、汞、六價鉻) Heavy metals (Lead (Pb)、 Cadmium (Cd)、Mercury (Hg)、 Hexavalent Chromium (CrVI))	---	所有包裝材料 All packaging materials	四種重金屬(鉛、 鎘、汞、六價鉻)於 包裝材料所構成的 各種零部件、油墨 或塗料中的濃度總 和不得超 100ppm  The total concentration of four heavy metals (lead, cadmium, mercury and hexavalent chromium) in various parts, inks or paints composed of packaging materials shall not exceed 100ppm.	Directive 94/62/EC, PPW TPCH	立即限用 Promptly restrict

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 2 級 Level 2	1	鄰苯二甲酸酯類 Phthalate esters (PAEs)	---	所有包裝材料 All packaging materials	鄰苯二甲酸酯類於包裝材料所構成的各種零部件、油墨或塗料中的濃度總和不得超 100ppm The total concentration of phthalates in components, inks or coatings composed of packaging materials shall not exceed 100 ppm.	TPCH	立即限用 Promptly restrict
	2	全氟/多氟烷基物質 Per/Poly fluoro alkyl substances (PFAS)	---		不得檢出 Not detected		立即禁用 Promptly prohibited

## 1.5.2 包裝材料與印刷品一覽表

## List of packing materials and Printed matter

項目 Item	包材名稱 Packing materials	說明/細項 Description/in detail	備註 Remark
1	紙盒/紙箱 Box/Carton	各種材料製成的紙箱，包裝盒、彩盒 Carton, Box, Color box made from various materials.	
2	包裝紙張 Wrappers	各種紙材製成的紙張，用於包裝或填充。 Paper made of various paper materials, used for wrapping or filling.	
3	緩衝材 Cushioning materials		
4	防護袋(布) Protection bag(sheet)	泡沫塑料或不織布、氣泡袋、EPE、淋膜袋(布) Foamed plastic or non-woven fabric, bubble bag, EPE, laminated woven bag (sheet).	
5	塑料袋 Plastic bag	PE 袋、PP 袋、防靜電袋 PE bag, PP bag, antistatic bag.	

6	脆盤(托盤) Tray	拖盤、真空或成型泡殼 Tray, vacuum or formed blister.	
7	亮 P 膜/霧 P 膜/膠片 PP coating/UP coating/Plastic sheet	用於粘貼各種包裝材料的保護膜或膠片 Protective film or plastic sheet for attaching various packaging materials.	
8	隔板 Insert/Inner/Divider	紙、EPE、EPS 類 Paper, EPE, EPS category.	
9	印刷油墨 Printing ink	用於包裝材料的印刷油墨 Ink applied for printing on packing materials.	
10	固定針/騎馬釘 Stapling nail/Saddle stitching	用於天蓋或紙本手冊鞍部打釘 Applied for stapling top cover or paper handbook.	
11	標籤 Label	條碼、安規、警告標語等... For barcode, safety compliance, warning sign, etc...	
12	膠 Glue	用於紙箱、膠裝手冊膠合或其它包裝材料膠合 Applied for gluing carton, paper handbook, or other packing materials.	
13	袖套 Sleeve	紙類印刷、PET 類的套子 Sleeve for Paper printing or PET category.	
14	棧板 Pallet	原木棧板、膠合(木)棧板 Wooden pallet, plywood pallet.	
15	膠帶 Adhesive tape	用於紙箱、塑料袋封裝的膠帶 Adhesive tape applied for sealing carton, plastic bag.	副資材 sub-materials
16	捆綁帶/打包帶 Strapping band	PP、PE 固定帶...等 PP, PE band, etc.	副資材 sub-materials
17	收縮膜/打包膜 Shrinkable film/Packaging film		副資材 sub-materials

## 1.6 電池重金屬標準

### Standards for Heavy Metals in Battery

所有供應商所提供之零件或產品，需完全符合下表列出有害物質與法規所要求之含量標準與規定，因各國法規與時俱進，法規所要求之含量標準與規定，需直接以該地區之最新公告為主，若供應商所提供之部件，如之後有發生不符該地區法規最新法規標準之情事，供應商應於一個月內主動揭露相關資訊並通知本公司採購單位，如法規有須溯及既往者，應協助康全依法規規定採取必要措施，包含回收等產品等。

All suppliers must provide products/components that meet the requirements of hazardous substances laws and regulations of the subject area. (The table below is provided as a reference. Please check the websites listed in Appendix-1 for up-to-date information.) If a product/component was later found to be out of compliance with the latest local regulation, the

supplier must, within one month, notify our purchasing department with detailed information, and assist Comtrend in taking measures to achieve compliance, including product/component recall, etc.

### 1.6.1 電池重金屬有害物質標準一覽表

#### List of Heavy Metal Hazardous Substances Standards for Batteries

等級 Level	項次 Item	有害物質名稱 Hazardous substance	CAS No.	適用對象 Applicable targets	允許濃度 Permitted concentration	相關法規指令 Relevant regulations and directives	執行狀態 Execution status
第 1 級 Level 1	1	鉛 / 鉛化合物 Lead (Pb) / Lead compounds	---	電池與電池組的鉛含量於電池總重量不得超過 40ppm The lead content of batteries and battery packs must not exceed 40 ppm of the total weight of the battery.			
	2	鎘 / 鎘化合物 Cadmium (Cd) / Cadmium compounds	---	電池與電池組的鎘含量於電池總重量不得超過 20ppm ● 排除項目： 使用於以下產品之可攜式電池與蓄電池則不受上述限值規範 a. 緊急照明設備及逃生系統 b. 醫療器材 The cadmium content of batteries and battery packs must not exceed 20 ppm of the total weight of the battery. ● Exclude items: Portable batteries and accumulators used in the following products are not subject to the above requirements. a. Emergency lighting equipment and escape system b. Medical equipment		2006/66/EC and Amendment 2013/56/EU	立即限用 Promptly restrict
	3	汞 / 汞化合物 Mercury (Hg) / Mercury compounds	---	電池與電池組的汞含量於電池總重量不得超過 5ppm The mercury content of batteries and battery packs must not exceed 5 ppm of the total weight of the battery.			

## 1.7 衝突礦產 (Conflict Minerals) 管理要求 Conflict Minerals Requirements

衝突礦產系指在武裝衝突和侵犯人權的情況下所開採的礦物，包含鎢 (Tungsten, W)、錫 (Tin, Sn)、鈹 (Tantalum, Ta)、金 (Gold, Au) 與鈷 (Cobalt, Co)。

這五類的礦產物質，對電子業是很重要的原物料。美國證券和交易委員會 (簡稱證管會, SEC) 於 2012 年通過「Dodd-Frank 衝突礦產」法案 (簡稱 DFCM)，要求美國公開發行公司，若產品中使用上述礦物，需調查其供應商並公佈相關資訊，從 2013 年開始，產品製造過程中，是否有使用「衝突礦產 (Conflict Minerals)」都要申報，廠商必須做「盡職調查說明」(OECD Due Diligence)，以斷絕武裝勢力的資金來源，保護人權，避免武力脅迫、欺壓勞工、濫用童工、破壞生態等問題。禁止透過無政府軍團或非法集團，由剛果民主共和國衝突區域之礦區開採或是循非法走私途徑取得。下列國家出口之金屬皆不符合「無衝突規範」：剛果民主共和國 (DRC)、盧安達 (Rwanda)、烏干達 (Uganda)、蒲隆地 (Burundi)、坦尚尼亞 (Tanzania)、肯亞 (Kenya) (聯合國安全理事會認定上述國家皆為剛果礦脈之礦產)。

所有本公司設計或委外設計、製造、銷售之產品及外購成品，皆需符合無衝突礦產之要求，其生產 (含外購成品) 所使用之材料、零件、組件、包裝材料與其它物料，必需請供應商承諾並配合衝突礦產調查，保證供應康全之材料、零件、組件、包裝材料與其它物料，物質來自美國衝突礦產官方單位 RBA (Responsible Business Alliance) 認可的冶煉廠名單，本規範之最新版 CMRT (Conflict Minerals Reporting Template, 衝突礦產報告模板) 表單及冶煉廠名單，以負責任礦產倡議組織 (Responsible Minerals Initiative, RMI) 最新公告為主。

Conflict minerals are minerals mined in an area of armed conflict and human rights abuses, including tin (Sn), tantalum (Ta), tungsten (W), gold (Au) and cobalt (Co).

These five minerals are vital to electronics products. In August 2012, the US Securities and Exchange Commission (SEC) passed Article No. 1502 of the “Dodd-Frank Wall Street Reform and Consumer Protection Act”, the final edition with regard to “Conflict minerals” procurement. It requires U.S. listed companies who believe they source from the region to carry out checks on their supply chains, known as due diligence, to determine whether their minerals purchases have benefited abusive armed groups. Companies must then report publicly to the US regulator, the Security and Exchange Commission (SEC), on the measures they’ve taken and make good faith efforts to conduct due diligence to avoid illegal mining, which leads to human trafficking, arms coercion, child labor abuse, and ecological damage. The countries or areas considered to be conflict-affected or high-risk are Democratic Republic of Congo (DRC), Rwanda, Uganda, Burundi, Tanzania, Kenya.

The suppliers must guarantee that all materials, parts, components, packaging materials, sub-materials, etc. used in products, that are designed, manufactured, sold by Comtrend, or its contractors, comply with the requirements of the Conflict Minerals Rule. The suppliers must guarantee minerals are produced from smelters recognized by RBA (Responsible Business Alliance). This document conform the latest announcement of (Responsible Minerals Initiative, RMI) .

最新版 CMRT 表單及冶煉廠名單請參考負責任礦產倡議組織 (RMI) 公告網址如下：

<https://www.responsiblemineralsinitiative.org/>

For the latest edition of the Conflict Minerals Reporting Template and Smelter Reference list, please visit the following website: <https://www.responsiblemineralsinitiative.org/>

CMRT 填寫方式可參考日本電子資訊技術產業協會 (JEITA) 教學文件，網址如下：

[https://home.jeita.or.jp/mineral/2020seminar/pdf/2020\\_cmrt\\_chinese.pdf](https://home.jeita.or.jp/mineral/2020seminar/pdf/2020_cmrt_chinese.pdf)

For information about how to complete CMRT, please visit the following website:

[https://home.jeita.or.jp/mineral/2020seminar/pdf/2020\\_cmrt\\_english.pdf](https://home.jeita.or.jp/mineral/2020seminar/pdf/2020_cmrt_english.pdf)

## 附錄一：各國有害物質法規與清單之相關網址連結

## Appendix 1: Links to relevant websites of national regulations and hazardous substances list

RoHS 相關資訊請參考歐盟公告網址如下：

For RoHS related information, please refer to the EU announcement website as follows:

[https://ec.europa.eu/environment/topics/waste-and-recycling/rohs-directive\\_en](https://ec.europa.eu/environment/topics/waste-and-recycling/rohs-directive_en)

REACH SVHC 清單請參考歐洲化學品管理局（ECHA）公告網址如下：

For the REACH SVHC list, please refer to the European Chemicals Agency (ECHA) announcement website as follows:

<https://echa.europa.eu/candidate-list-table>

REACH Annex XVII（附錄 17）清單請參考歐洲化學品管理局（ECHA）公告網址如下：

For the list of REACH Annex XVII (Appendix 17), please refer to the European Chemicals Agency (ECHA) announcement website as follows:

<https://echa.europa.eu/substances-restricted-under-reach>

POPs 清單請參考歐洲化學品管理局（ECHA）公告網址如下：\_

For the list of POPs, please refer to the European Chemicals Agency (ECHA) announcement website as follows:

<https://echa.europa.eu/list-of-substances-subject-to-pops-regulation>

SOR/2012-285 相關資訊請參考加拿大政府公告網址如下：\_

For SOR/2012-285 related information, please refer to the Canadian government announcement website as follows:

<https://laws-lois.justice.gc.ca/eng/regulations/SOR-2012-285/FullText.html>

CP65 清單請參考美國加州環境衛生風險評估局（OEHHA）公告網址如下：

For the list of CP65, please refer to the announcement on the California Environmental Health Risk Assessment Agency (OEHHA) website as follows:

<https://oehha.ca.gov/proposition-65/proposition-65-list>

TSCA Section 6(h) 相關資訊請參考美國環保署（EPA）公告網址如下：

For TSCA Section 6(h) related information, please refer to the US Environmental Protection Agency (EPA) announcement website as follows:

<https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/persistent-bioaccumulative-and-toxic-pbt-chemicals>

CEPA 清單請參考加拿大政府公告網址如下：

For the CEPA list, please refer to the Canadian government announcement website as follows:

<https://www.canada.ca/en/health-canada/services/chemical-substances.html>

IEC 62474 相關資訊請參考 IEC 公告網址如下：\_

For IEC 62474 related information, please refer to the IEC announcement website as follows:

<https://std.iec.ch/iec62474/iec62474.nsf/Index>



附錄二：放射性物質包含下列物質

Appendix 2: Radioactive Substances

項次 Item	有害物質名稱 Substance name	CAS No.
1	鈾-238 Uranium-238	7440-61-1
2	氡 Radon	10043-92-2
3	錒-241 Americium-241	14596-10-2
4	釷-232 Thorium-232	7440-29-1
5	銫-137 Cesium-137	10045-97-3
6	鍶-90 Strontium-90	10098-97-2
7	其他放射性物質 Other radioactive substances	---

## 附錄三：臭氧層破壞物質包含下列物質

## Appendix 3: Ozone Depleting Substances (ODS)

項次 Item	有害物質名稱 Substance name	CAS No.
氟氯碳化物 Chlorofluorocarbons(CFC's)包含下列物質：		
1	Trichlorofluoromethane (CFC-11)	75-69-4
2	Dichlorodifluoromethane (CFC-12)	75-71-8
3	Chlorotrifluoromethane (CFC-13)	75-72-9
4	Pentachlorofluoroethane (CFC-111)	354-56-3
5	Tetrachlorodifluoroethane (CFC-112)	76-12-0
	1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112)	76-12-0
	1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)	76-11-9
6	Trichlorotrifluoroethane (CFC-113)	76-13-1
	1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113)	76-13-1
	1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)	354-58-5
7	Dichlorotetrafluoroethane (CFC-114)	76-14-2
8	Monochloropentafluoroethane (CFC-115)	76-15-3
9	Heptachlorofluoropropane (CFC-211)	422-78-6
	1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa)	135401-87-5
	1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)	422-78-6
		422-81-1
10	Hexachlorodifluoropropane (CFC-212)	3182-26-1
11	Pentachlorotrifluoropropane (CFC-213)	2354-06-5
		134237-31-3
12	Tetrachlorotetrafluoropropane (CFC-214)	29255-31-0
	1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa)	2268-46-4
	1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)	---

		1599-41-3
	Trichloropentafluoropropane (CFC-215)	1599-41-3
	1,2,2-Trichloropentafluoropropane (CFC-215aa)	76-17-5
13	1,2,3-Trichloropentafluoropropane (CFC-215ba)	---
	1,1,2-Trichloropentafluoropropane (CFC-215bb)	---
	1,1,3-Trichloropentafluoropropane (CFC-215cb)	---
	1,1,1-Trichloropentafluoropropane (CFC-215ca)	4259-43-2
14	Dichlorohexafluoropropane (CFC-216)	661-97-2
15	Chloroheptafluoropropane (CFC-217)	422-86-6
16	Other CFC's prohibited by Montreal Protocol	---
氟氯烴化物 Hydrochlorofluorocarbons(HCFC's)包含下列物質:		
1	Dichlorofluoromethane (HCFC-21)	75-43-4
2	Chlorodifluoromethane (HCFC-22)	75-45-6
3	Chlorofluoromethane (HCFC-31)	593-70-4
	Tetrachlorofluoroethane (HCFC-121)	134237-32-4
4	1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121)	354-14-3
	1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a)	354-11-0
	Trichlorodifluoroethane (HCFC-122)	41834-16-6
	1,2,2-Trichloro-1,1-difluoroethane (HCFC-122)	354-21-2
5	1,1,2-Trichloro-1,2-difluoroethane (HCFC-122a)	354-15-4
	1,1,1-Trichloro-2,2-difluoroethane (HCFC-122b)	354-12-1
	Dichlorotrifluoroethane (HCFC-123)	34077-87-7
	1,1-Dichloro-2,2,2-trifluoroethane (HCFC-123)	306-83-2
6	1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	354-23-4
	1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	90454-18-5
		812-04-4
7	Chlorotetrafluoroethane	63938-10-3

	(HCFC-124) 2-chloro-1,1,1,2-tetrafluoroethane	2837-89-0
	(HCFC-124) 1-chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	354-25-6
8	Trichlorofluoroethane (HCFC-131) 1,1,2-Trichloro-2-fluoroethane (HCFC-131) 1,1,2-Trichloro-1-fluoroethane (HCFC131a) 1,1,1-Trichloro-2-fluoroethane (HCFC-131b)	27154-33-2; (134237-34-6) 359-28-4 811-95-0 2366-36-1
9	Dichlorodifluoroethane (HCFC-132) 1,2-Dichloro-1,2-difluoroethane (HCFC-132) 1,1-Dichloro-2,2-difluoroethane (HCFC-132a) 1,2-Dichloro-1,1-difluoroethane (HCFC-132b) 1,1-Dichloro-1,2-difluoroethane (HFCF-132c)	25915-78-0 431-06-1 471-43-2 1649-08-7 1842-05-3
10	Chlorotrifluoroethane (HCFC-133) 1-Chloro-1,2,2-trifluoroethane (HCFC-133) 2-Chloro-1,1,1-trifluoroethane (HCFC-133a) 1-Chloro-1,1,2-trifluoroethane (HCFC-133b)	1330-45-6 431-07-2 1330-45-6 75-88-7 421-04-5
11	Dichlorofluoroethane (HCFC-141) 1,2-Dichloro-1-fluoroethane (HCFC-141) 1,1-Dichloro-2-fluoroethane (HCFC-141a) 1,1-Dichloro-1-fluoroethane (HCFC-141b)	1717-00-6; (25167-88-8) 430-57-9 430-53-5

		1717-00-6
12	Chlorodifluoroethane (HCFC-142)	25497-29-4
	2-Chloro-1,1-Difluoroethane (HCFC-142)	338-65-8
	1-Chloro-1,1-difluoroethane (HCFC-142b)	75-68-3
	1-Chloro-1,2-difluoroethane (HCFC-142a)	338-64-7
13	Chlorofluoroethane (HCFC-151)	110587-14-9
	1-Chloro-2-fluoroethane (HCFC-151)	762-50-5
	1-Chloro-1-fluoroethane (HCFC-151a)	1615-75-4
14	Hexachlorofluoropropane (HCFC-221)	134237-35-7
	1,1,1,2,2,3-Hexachloro-3-fluoropropane (HCFC-221ab)	29470-94-8
		422-26-4
15	Pentachlorodifluoropropane (HCFC-222)	134237-36-8
	1,1,1,3,3-pentachloro-2,2-difluoropropane (HCFC-222ca)	422-49-1
	1,2,2,3,3-pentachloro-1,1-difluoropropane (HCFC-222aa)	422-30-0
16	Tetrachlorotrifluoropropane (HCFC-223)	134237-37-9
	1,1,3,3-Tetrachloro-1,2,2-trifluoropropane (HCFC-223ca)	422-52-6
	1,1,1,3-Tetrachloro-2,2,3-trifluoropropane (HCFC-223cb)	422-50-4
17	Trichlorotetrafluoropropane (HCFC-224)	134237-38-0
	1,3,3-Trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca)	422-54-8
	1,1,3-Trichloro-1,2,2,3-tetrafluoropropane (HCFC-224cb)	422-53-7
	1,1,1-Trichloro-2,2,3,3-tetrafluoropropane (HCFC-224cc)	422-51-5

		127564-92-5
	Dichloropentafluoropropane (HCFC-225)	128903-21-9
	2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa)	422-48-0
	2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	422-44-6
	1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb)	422-56-0
18	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	507-55-1
	1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	13474-88-9
	1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC-225cc)	
	1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da)	431-86-7
	1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea)	136013-79-1
	1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb)	111512-56-2
19	Chlorohexafluoropropane (HCFC-226)	134308-72-8
	2-Chloro-1,1,1,3,3,3-hexafluoro-propane (HCFC-226da)	431-87-8
20	Pentachlorofluoropropane (HCFC-231)	134190-48-0
	1,1,1,2,3-pentachloro-2-fluoro-propane (HCFC-231bb)	421-94-3
21	Tetrachlorodifluoropropane (HCFC-232)	134237-39-1
	1,1,1,3-Tetrachloro-3,3-difluoropropane (HCFC-232fc)	460-89-9
22	Trichlorotrifluoropropane (HCFC-233)	134237-40-4
	1,1,1-Trichloro-3,3,3-trifluoropropane (HCFC-233fb)	7125-83-9
23	Dichlorotetrafluoropropane (HCFC-234)	127564-83-4
	1,2-Dichloro-1,2,3,3-tetrafluoropropane (HCFC-234db)	425-94-5
24	Chloropentafluoropropane (HCFC-235)	134237-41-5
	1-Chloro-1,1,3,3,3-pentafluoropropane (HCFC-235fa)	460-92-4
25	Tetrachlorofluoropropane (HCFC-241)	134190-49-1

	1,1,2,3-Tetrachloro-1-fluoropropane (HCFC-241db)	666-27-3
26	Trichlorodifluoropropane (HCFC-242)	134237-42-6
	1,3,3-Trichloro-1,1-difluoropropane (HCFC-242fa)	460-63-9
27	Dichlorotrifluoropropane (HCFC-243)	134237-43-7
	1,1-Dichloro-1,2,2-trifluoropropane (HCFC-243cc)	7125-99-7
	2,3-Dichloro-1,1,1-trifluoropropane (HCFC-243db)	338-75-0
	3,3-Dichloro-1,1,1-trifluoropropane (HCFC-243fa)	460-69-5
28	Chlorotetrafluoropropane (HCFC-244)	134190-50-4
	3-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244ca)	679-85-6
	1-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244cc)	421-75-0
29	Trichlorofluoropropane (HCFC-251)	134190-51-5
	1,1,3-Trichloro-1-fluoropropane (HCFC-251fb)	818-99-5
	1,1,2-Trichloro-1-fluoropropane (HCFC-251dc)	421-41-0
30	Dichlorodifluoropropane (HCFC-252)	134190-52-6
	1,3-Dichloro-1,1-difluoropropane (HCFC-252fb)	819-00-1
31	Chlorotrifluoropropane (HCFC-253)	134237-44-8
	3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	460-35-5
32	Dichlorofluoropropane (HCFC-261)	134237-45-9
	1,1-Dichloro-1-fluoropropane (HCFC-261fc)	7799-56-6
	1,2-Dichloro-2-fluoro-propane (HCFC-261ba)	420-97-3
33	Chlorodifluoropropane (HCFC-262)	134190-53-7
	1-Chloro-2,2-difluoropropane (HCFC-262ca)	420-99-5
	2-Chloro-1,3-difluoropropane (HCFC-262da)	102738-79-4

	1-Chloro-1,1-difluoropropane (HCFC-262fc)	421-02-3
34	Chlorofluoropropane (HCFC-271)	134190-54-8
	2-Chloro-2-fluoropropane (HCFC-271ba)	420-44-0
	1-Chloro-1-fluoropropane (HCFC-271fb)	430-55-7
35	Other HCFC's prohibited by Montreal Protocol.	---
海龍(Halons)包含下列物質:		
1	Bromochloromethane (Halon-1011)	74-97-5
2	Dibromodifluoromethane (Halon 1202)	75-61-6
3	Bromochlorodifluoromethane (Halon 1211)	353-59-3
4	Bromotrifluoromethane (Halon 1301)	75-63-8
5	Dibromotetrafluoroethane (Halon 2402)	124-73-2
6	Other Halons prohibited by Montreal Protocol.	---
溴氟烴化物 Bromodifluoromethane and isomers(HBFC's)包含下列物質:		
1	Dibromofluoromethane (HBFC-21 B2)	1868-53-7
2	Bromodifluoromethane (HBFC-22 B1)	1511-62-2
3	Bromofluoromethane (HBFC-31 B1)	373-52-4
4	Tetrabromofluoroethane(HBFC-121 B4)	306-80-9
5	Tribromodifluoroethane (HBFC-122 B3)	---
6	Dibromotrifluoroethane (HBFC-123 B2)	354-04-1
7	Bromotetrafluoroethane (HBFC-124 B1)	124-72-1
8	Tribromofluoroethane (HBFC-131 B3)	---
9	Dibromodifluoroethane (HBFC-132 B2)	75-82-1
10	Bromotrifluoroethane (HBFC-133 B1)	421-06-7
11	Dibromofluoroethane (HBFC-141 B2)	358-97-4
12	Bromodifluoroethane (HBFC-142 B1)	420-47-3
13	Bromofluoroethane (HBFC-151 B1)	762-49-2
14	Hexabromofluoropropane (HBFC-221 B6)	---
15	Pentabromodifluoropropane (HBFC-222 B5)	---
16	Tetrabromotrifluoropropane (HBFC-223 B4)	---
17	Tribromotetrafluoropropane (HBFC-224 B3)	---
18	Dibromopentafluoropropane (HBFC-225 B2)	431-78-7
19	Bromohexafluoropropane (HBFC-226 B1)	2252-78-0
20	Pentabromofluoropropane (HBFC-231 B5)	---
21	Tetrabromodifluoropropane (HBFC-232 B4)	---
22	Tribromotrifluoropropane (HBFC-233 B3)	---



23	Dibromotetrafluoropropane (HBFC-234 B2)	---
24	Bromopentafluoropropane (HBFC-235 B1)	460-88-8
25	Tetrabromofluoropropane (HBFC-241 B4)	---
26	Tribromodifluoropropane (HBFC-242 B3)	70192-80-2
27	Dibromotrifluoropropane (HBFC-243 B2)	431-21-0
28	Bromotetrafluoropropane (HBFC-244 B1)	679-84-5
29	Tribromofluoropropane (HBFC-251 B3)	75372-14-4
30	Dibromodifluoropropane (HBFC-252 B2)	460-25-3
31	Bromotrifluoropropane (HBFC-253 B1)	421-46-5
32	Dibromofluoropropane (HBFC-261 B2)	51584-26-0
33	Bromodifluoropropane (HBFC-262 B1)	---
34	Bromofluoropropane (HBFC-271 B1)	1871-72-3
35	Other HBFC's prohibited by Montreal Protocol.	---
其他臭氧層破壞物質 Other ozone depletion substances 包含下列物質:		
1	Tetrachloromethane (carbon tetrachloride)	56-23-5
2	1,1,1-Trichloroethane (methylchloroform)	71-55-6
3	Bromomethane (methyl bromide)	74-83-9
4	Bromoethane (ethyl bromide)	74-96-4
5	Trifluoroiodomethane (trifluoromethyl iodide)	2314-97-8
6	Chloromethane (methyl chloride)	74-87-3
7	其他臭氧層破壞物質(Other ozone depletion substances)	---

附錄四：氟化溫室氣體（PFC、SF6、HFC）包含下列物質  
Appendix 4: Fluorinated Greenhouse Gases (PFC, SF6, HFC)

項次 Item	有害物質名稱 Substance name	CAS No.
1	Tetrafluoromethane, Carbon tetrafluoride, (PFC-14)	75-73-0
2	Hexafluoroethane (PFC-116)	76-16-4
3	Octafluoropropane (PFC-218)	76-19-7
4	Decafluorobutane (PFC-31-10)	355-25-9
5	Dodecafluoropentane (PFC-41-12)	678-26-2
6	Tetradecafluorohexane (PFC-51-14)	355-42-0
7	Octafluorocyclobutane (PFC-c318)	115-25-3
8	Sulfur Hexafluoride (SF6)	2551-62-4
9	Trifluoromethane (HFC-23)	75-46-7
10	Difluoromethane (HFC-32)	75-10-5
11	Methyl fluoride (HFC-41)	593-53-3
12	2H,3H-Decafluoropentane (HFC-43-10mee)	138495-42-8
13	Pentafluoroethane (HFC-125)	354-33-6
14	1,1,2,2-Tetrafluoroethane (HFC-134)	359-35-3
15	1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2
16	1,1-Difluoroethane (HFC-152a)	75-37-6
17	1,1,2-Trifluoroethane (HFC-143 )	430-66-0
18	1,1,1-Trifluoroethane (HFC-143a)	420-46-2
19	2H-Heptafluoropropane (HFC-227ea)	431-89-0
20	1,1,1,2,2,3-Hexafluoro-propane (HFC-236cb)	677-56-5
21	1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)	431-63-0
22	1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)	690-39-1
23	1,1,2,2,3-Pentafluoropropane (HFC-245ca)	679-86-7
24	1,1,1,3,3-Pentafluoropropane (HFC-245fa)	460-73-1
25	1,1,1,3,3-Pentafluorobutane (HFC-365mfc)	406-58-6
26	Other HFC's & PFC's	---

附錄五：有機錫化合物包含下列物質

Appendix 5: Organostannic compounds

項次 Item	有害物質名稱 Substance name	CAS No.
Tri-substituted organostannic compounds		
1	Triphenyltin-N, N-dimethyldithiocarbamate	1803-12-9
2	Triphenyltinfluoride	379-52-2
3	Triphenyltinacetate	900-95-8
4	Triphenyltinchloride	639-58-7
5	Triphenyltinhydroxide	76-87-9
6	Triphenyltin fattyacid((9-11)salt)	18380-71-7 18380-72-8 47672-31-1 94850-90-5
7	Triphenyltinchloroacetate	7094-94-2
8	Tributyltinmethacrylate	2155-70-6
9	Bis(tributyltin)fumalate	6454-35-9
10	Tributyltinfluoride	1983-10-4
11	Bis(tributyltin)2,3-dibromosuccinate	31732-71-5
12	Tributyltinacetate	56-36-0
13	Tributyltinlaurate	3090-36-6
14	Bis(tributyltin)phthalate	4782-29-0
15	Copolymer of alkyl(c=8) acrylate,methyl methacrylate and tributyltin methacrylate	67772-01-4
16	Tributyltinsulfamate	6517-25-5
17	Bis(tributyltin)maleate	14275-57-1
18	Tributyltinchloride	1461-22-9 7342-38-3
19	Tributyltin cyclopentane carbonate=mixture	85409-17-2
20	Tributyltin-1, 2,3,4,4a, 4b, 5,6,10,10a-decahydro-7-isopropyl-1, 4a-dimethyl-1-phenanthrenecarboxylatemix; Other tri-substituted organostannic compounds	26239-64-5
21	Other tri-substituted organostannic compounds	---
Dibutyltin (DBT) compounds		
1	Dibutyltin oxide	818-08-6
2	Dibutyltin diacetate	1067-33-0
3	Dibutyltin dilaurate	77-58-7

4	Dibutyltin maleate	78-04-6
5	Other dibutyltin compounds	---
Diocetyl tin (DOT) compounds		
1	Diocetyl Tin Oxide	870-08-6
2	Diocetyl tin dilaurate	3648-18-8
3	Other Diocetyl tin compounds	

附錄六：全氟辛烷磺酸包含下列物質

Appendix 6: Perfluorooctane sulfonates (PFOS)

項次 Item	有害物質名稱 Substance name	CAS No.
1	2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl[(perfluoro-C4-8-alkyl)- sulfonyl]amino]ethyl acrylate and vinylidene chloride	306975-62-2
2	Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7

附錄七：短鏈氯化石蠟包含下列物質

Appendix 7: Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)

項次 Item	有害物質名稱 Substance name	CAS No.
1	Alkanes, C10-13, chloro	85535-84-8
2	Alkanes, C10-12, chloro	108171-26-2
3	Alkanes, C12-13, chloro	71011-12-6
4	Alkanes, chloro	61788-76-9
5	Other Short Chain Chlorinated Paraffins	-

附錄八：高氯酸鹽包含下列物質

Appendix 8: Perchlorates

項次 Item	有害物質名稱 Substance name	CAS No.
1	Lithium Perchlorate	7791-03-9
2	Ammonium perchlorate	7790-98-9
3	Barium perchlorate	13465-95-7
4	Lead perchlorate	13637-76-8
5	Magnesium Perchlorate	10034-81-8
6	Perchloric acid, cobalt (2+) salt	13455-31-7
7	Perchloric acid, mercury(2+) salt	7616-83-3
8	Perchloric acid, nickel(2+) salt, hexahydrate	13520-61-1
9	Nickel perchlorate	13637-71-3
10	Potassium Perchlorate	7778-74-7
11	Sodium Perchlorate	7601-89-0
12	Thallium(3+) perchlorate	15596-83-5

附錄九：多氯萘包含下列物質

## Appendix 9: Polychlorinated naphthalenes

項次 Item	有害物質名稱 Substance name	CAS No.
1	1-Chloronaphthalene	90-13-1
2	2-Chloronaphthalene	91-58-7
3	1,5-Dichloronaphthalene	1825-30-5
4	1,4-Dichloronaphthalene	1825-31-6
5	1,2-Dichloronaphthalene	2050-69-3
6	1,6-Dichloronaphthalene	2050-72-8
7	1,7-Dichloronaphthalene	2050-73-9
8	1,8-Dichloronaphthalene	2050-74-0
9	2,3-Dichloronaphthalene	2050-75-1
10	2,6-Dichloronaphthalene	2065-70-5
11	1,3-Dichloronaphthalene	2198-75-6
12	2,7-Dichloronaphthalene	2198-77-8
13	Chloronaphthalene	25586-43-0
14	Dichloronaphthalene	28699-88-9
15	Pentachloronaphthalene	1321-64-8
16	Trichloronaphthalene	1321-65-9
17	Hexachloronaphthalene	1335-87-1
18	Tetrachloronaphthalene	1335-88-2
19	Perchloronaphthalene	2234-13-1
20	1,4,6-Trichloronaphthalene	2437-54-9
21	1,4,5-Trichloronaphthalene	2437-55-0
22	1,4,5,8-Tetrachloronaphthalene	3432-57-3
23	1,2,4,8-Tetrachloronaphthalene	6529-87-9
24	1,2,4,5-Tetrachloronaphthalene	6733-54-6
25	1,2,3,6,7,8-Hexachloronaphthalene	17062-87-2
26	1,2,3,4-Tetrachloronaphthalene	20020-02-4
27	1,3,5,8-Tetrachloronaphthalene	31604-28-1
28	Heptachloronaphthalene	32241-08-0
29	2,3,6,7-Tetrachloronaphthalene	34588-40-4
30	1,2,4-Trichloronaphthalene	50402-51-2
31	1,2,3-Trichloronaphthalene	50402-52-3
32	1,3,5-Trichloronaphthalene	51570-43-5
33	1,2,6-Trichloronaphthalene	51570-44-6



34	1,2,4,6-Tetrachloronaphthalene	51570-45-7
35	1,2,3,5-Tetrachloronaphthalene	53555-63-8
36	1,3,5,7-Tetrachloronaphthalene	53555-64-9
37	1,2,3,5,7-Pentachloronaphthalene	53555-65-0
38	1,2,5-Trichloronaphthalene	55720-33-7
39	1,2,7-Trichloronaphthalene	55720-34-8
40	1,2,8-Trichloronaphthalene	55720-35-9
41	1,3,6-Trichloronaphthalene	55720-36-0
42	1,3,7-Trichloronaphthalene	55720-37-1
43	1,3,8-Trichloronaphthalene	55720-38-2
44	1,6,7-Trichloronaphthalene	55720-39-3
45	2,3,6-Trichloronaphthalene	55720-40-6
46	1,2,3,7-Tetrachloronaphthalene	55720-41-7
47	1,3,6,7-Tetrachloronaphthalene	55720-42-8
48	1,4,6,7-Tetrachloronaphthalene	55720-43-9
49	1,2,3,4,5,6,7-Heptachloronaphthalene	58863-14-2
50	1,2,3,4,5,6,8-Heptachloronaphthalene	58863-15-3
51	1,2,3,4,5,6-Hexachloronaphthalene	58877-88-6
52	1,2,4,7-Tetrachloronaphthalene	67922-21-8
53	1,2,5,6-Tetrachloronaphthalene	67922-22-9
54	1,2,5,7-Tetrachloronaphthalene	67922-23-0
55	1,2,6,8-Tetrachloronaphthalene	67922-24-1
56	1,2,3,4,5-Pentachloronaphthalene	67922-25-2
57	1,2,3,4,6-Pentachloronaphthalene	67922-26-3
58	1,2,3,4,5,7-Hexachloronaphthalene	67922-27-4
59	1,2,4,5,6,8-Hexachloronaphthalene	90948-28-0
60	1,2,4,5,7,8-Hexachloronaphthalene	103426-92-2
61	1,2,3,4,5,8-Hexachloronaphthalene	103426-93-3
62	1,2,3,5,7,8-Hexachloronaphthalene	103426-94-4
63	1,2,3,5,6,8-Hexachloronaphthalene	103426-95-5
64	1,2,3,4,6,7-Hexachloronaphthalene	103426-96-6
65	1,2,3,5,6,7-Hexachloronaphthalene	103426-97-7
66	1,2,3,6-Tetrachloronaphthalene	149864-78-8
67	1,2,6,7-Tetrachloronaphthalene	149864-79-9
68	1,2,5,8-Tetrachloronaphthalene	149864-80-2
69	1,2,3,8-Tetrachloronaphthalene	149864-81-3
70	1,2,7,8-Tetrachloronaphthalene	149864-82-4
71	1,2,3,7,8-Pentachloronaphthalene	150205-21-3

72	1,3,6,8-Tetrachloronaphthalene	150224-15-0
73	1,2,3,6,7-Pentachloronaphthalene	150224-16-1
74	1,2,4,6,7-Pentachloronaphthalene	150224-17-2
75	1,2,3,5,6-Pentachloronaphthalene	150224-18-3
76	1,2,4,5,7-Pentachloronaphthalene	150224-19-4
77	1,2,4,5,6-Pentachloronaphthalene	150224-20-7
78	1,2,4,7,8-Pentachloronaphthalene	150224-21-8
79	1,2,4,6,8-Pentachloronaphthalene	150224-22-9
80	1,2,3,6,8-Pentachloronaphthalene	150224-23-0
81	1,2,3,5,8-Pentachloronaphthalene	150224-24-1
82	1,2,4,5,8-Pentachloronaphthalene	150224-25-2

附錄十：溴化阻燃劑（PBBs、PBDEs 與 HBCDD 除外）包含下列物質

Appendix 14: Brominated flame retardants (other than PBBs, PBDEs, and HBCDD)

項次 Item	有害物質名稱 Substance name	CAS No.
1	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	---
2	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	---
3	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	---
4	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls] in combination with antimony compounds]	---
5	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	---
6	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	---
7	Poly(2,6-dibromo-phenylene oxide)	69882-11-7
8	Tetra-decabromo-diphenoxy-benzene	58965-66-5
9	TBBA, unspecified	30496-13-0
10	TBBA-epichlorhydrin oligomer	40039-93-8
11	TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
12	TBBA carbonate oligomer	28906-13-0
13	TBBA carbonate oligomer, phenoxy end capped	94334-64-2
14	TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
15	TBBA-bisphenol A-phosgene polymer	32844-27-2
16	Brominated epoxy resin end-capped with tribromophenol	139638-58-7
17	Brominated epoxy resin end-capped with tribromophenol	135229-48-0
18	TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
19	TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
20	TBBA-bis-(allyl-ether)	25327-89-3

21	TBBA-dimethyl-ether	37853-61-5
22	Tetrabromo-bisphenol S	39635-79-5
23	TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
24	2,4-Dibromo-phenol	615-58-7
25	2,4,6-tribromo-phenol	118-79-6
26	Pentabromo-phenol	608-71-9
27	2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
28	Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
29	Bis(methyl)tetrabromo-phthalate	55481-60-2
30	Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
31	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
32	TBPA, glycol-and propylene-oxide esters	75790-69-1
33	N,N'-Ethylene -bis-(tetrabromo-phthalimide)	32588-76-4
34	Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
35	2,3-Dibromo-2-butene-1,4-diol	3234-02-4
36	Dibromo-neopentyl-glycol	3296-90-0
37	Dibromo-propanol	96-13-9
38	Tribromo-neopentyl-alcohol	36483-57-5
39	Poly tribromo-styrene	57137-10-7
40	Tribromo-styrene	61368-34-1
41	Dibromo-styrene grafted PP	171091-06-8
42	Poly-dibromo-styrene	31780-26-4
43	Bromo-/Chloro-paraffins	68955-41-9
44	Bromo-/Chloro-alpha-olefin	82600-56-4
45	Vinylbromide	593-60-2
46	Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
47	Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
48	Tris(tribromo-neopentyl) phosphate	19186-97-1
49	Chlorinated and brominated phosphate ester	125997-20-8
50	Pentabromo-toluene	87-83-2
51	Pentabromo-benzyl bromide	38521-51-6
52	1,3-Butadiene homopolymer,brominated	68441-46-3
53	Pentabromo-benzyl-acrylate, monomer	59447-55-1
54	Pentabromo-benzyl-acrylate, polymer	59447-57-3
55	Decabromo-diphenyl-ethane	84852-53-9
56	Tribromo-bisphenyl-maleinimide	59789-51-4
57	Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
58	Tetrabromo-cyclo-octane	31454-48-5

59	1,2-Dibromo-4-(1,2 dibromo-ethyl)-cyclo-hexane	3322-93-8
60	Tetrabromophthalic acid Na salt	25357-79-3
61	Tetrabromo phthalic anhydride	632-79-1
62	Other Brominated Flame Retardants	---

附錄十一：氯化阻燃劑（CFR）包含下列物質

Appendix 11: Chlorinated Flame Retardants (CFR)

項次 Item	有害物質名稱 Substance name	CAS No.
1	Tetrakis(2-chloroethyl)dichloroisopentylidiphosphate	38051-10-4
2	Tris(1-chloro-2-propyl)phosphate	13674-84-5
3	Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0
4	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP, TDCP)	13674-87-8
5	Other Chlorinated Flame Retardants	---

## 附錄十二：鹵化阻燃劑包含下列物質

## Appendix 12: Halogenated Flame Retardants

項次 Item	有害物質名稱 Substance name	CAS No.
1	Bromodiphenyl ether	101-55-3
2	1,2,4,5,7,8-Hexachloronaphthalene	103426-92-2
3	1,2,3,4,5,8-Hexachloronaphthalene	103426-93-3
4	1,2,3,5,7,8-Hexachloronaphthalene	103426-94-4
5	1,2,3,5,6,8-Hexachloronaphthalene	103426-95-5
6	1,2,3,4,6,7-Hexachloronaphthalene	103426-96-6
7	1,2,3,5,6,7-Hexachloronaphthalene	103426-97-7
8	Alkanes, C10-12, chloro	108171-26-2
9	Decabromodiphenyl ether	1163-19-5
10	2,4,6-tribromo-phenol	118-79-6
11	Chlorinated and brominated phosphate ester	125997-20-8
12	Pentachloronaphthalene	1321-64-8
13	Trichloronaphthalene	1321-65-9
14	Hexachloronaphthalene	1335-87-1
15	Tetrachloronaphthalene	1335-88-2
16	alpha-hexabromocyclododecane	134237-50-6
17	beta-hexabromocyclododecane	134237-51-7
18	gamma-hexabromocyclododecane	134237-52-8
19	Brominated epoxy resin end-capped with tribromophenol	135229-48-0
20	1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a, 11,12,12a-dodecahydro-	13560-89-9
21	1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a, 11,12,12a-dodecahydro-, (1R,4S,4aS,6aR,7R,10S,10aS,12aR)-rel-	135821-03-3
22	1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6, 6a,7,10,10a,11,12,12a-dodecahydro-, (1R,4S,4aS,6aS,7S,10R,10aR,12aR)-rel-	135821-74-8
23	Decabromobiphenyl	13654-09-6
24	Tris(1-chloro-2-propyl)phosphate	13674-84-5
25	Tris(1,3-dichloro-2-propyl)phosphate	13674-87-8

26	Brominated epoxy resin end-capped with tribromophenol	139638-58-7
27	1,2,3,6-Tetrachloronaphthalene	149864-78-8
28	1,2,6,7-Tetrachloronaphthalene	149864-79-9
29	1,2,5,8-Tetrachloronaphthalene	149864-80-2
30	1,2,3,8-Tetrachloronaphthalene	149864-81-3
31	1,2,7,8-Tetrachloronaphthalene	149864-82-4
32	1,2,3,7,8-Pentachloronaphthalene	150205-21-3
33	1,3,6,8-Tetrachloronaphthalene	150224-15-0
34	1,2,3,6,7-Pentachloronaphthalene	150224-16-1
35	1,2,4,6,7-Pentachloronaphthalene	150224-17-2
36	1,2,3,5,6-Pentachloronaphthalene	150224-18-3
37	1,2,4,5,7-Pentachloronaphthalene	150224-19-4
38	1,2,4,5,6-Pentachloronaphthalene	150224-20-7
39	1,2,4,7,8-Pentachloronaphthalene	150224-21-8
40	1,2,4,6,8-Pentachloronaphthalene	150224-22-9
41	1,2,3,6,8-Pentachloronaphthalene	150224-23-0
42	1,2,3,5,8-Pentachloronaphthalene	150224-24-1
43	1,2,4,5,8-Pentachloronaphthalene	150224-25-2
44	Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
45	1,2,3,6,7,8-Hexachloronaphthalene	17062-87-2
46	Dibromo-styrene grafted PP	171091-06-8
47	1,5-Dichloronaphthalene	1825-30-5
48	1,4-Dichloronaphthalene	1825-31-6
49	Tris(tribromo-neopentyl) phosphate	19186-97-1
50	1,2,3,4-Tetrachloronaphthalene	20020-02-4
51	Dibromodiphenyl ethers	2050-47-7
52	1,2-Dichloronaphthalene	2050-69-3
53	1,6-Dichloronaphthalene	2050-72-8
54	1,7-Dichloronaphthalene	2050-73-9
55	1,8-Dichloronaphthalene	2050-74-0
56	2,3-Dichloronaphthalene	2050-75-1
57	2-Bromobiphenyl	2052-07-5
58	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
59	2,6-Dichloronaphthalene	2065-70-5
60	3-Bromobiphenyl	2113-57-7
61	TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
62	1,3-Dichloronaphthalene	2198-75-6
63	2,7-Dichloronaphthalene	2198-77-8



64	Perchloronaphthalene	2234-13-1
65	1,4,6-Trichloronaphthalene	2437-54-9
66	1,4,5-Trichloronaphthalene	2437-55-0
67	TBBA-bis-(allyl-ether)	25327-89-3
68	Tetrabromophthalic acid Na salt	25357-79-3
69	Chloronaphthalene	25586-43-0
70	N,N,N,-triethylethanaminium 1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulfonate	25628-08-4
71	Hexabromocyclododecane (HBCDD)	25637-99-4
72	Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
73	Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
74	Nonabromobiphenyl	27753-52-2
75	Dichloronaphthalene	28699-88-9
76	TBBA carbonate oligomer	28906-13-0
77	TBBA, unspecified	30496-13-0
78	Tetrabromo-cyclo-octane	31454-48-5
79	1,3,5,8-Tetrachloronaphthalene	31604-28-1
80	Poly-dibromo-styrene	31780-26-4
81	1,2,5,6,9,10-hexabromocyclodecane	3194-55-6
82	Heptachloronaphthalene	32241-08-0
83	2,3-Dibromo-2-butene-1,4-diol	3234-02-4
84	Pentabromodiphenyl ether	32534-81-9
85	Octabromodiphenyl ether	32536-52-0
86	N,N'-Ethylene -bis-(tetrabromo-phthalimide)	32588-76-4
87	2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
88	TBBA-bisphenol A-phosgene polymer	32844-27-2
89	Dibromo-neopentyl-glycol	3296-90-0
90	1,2-Dibromo-4-(1,2 dibromo-ethyl)-cyclo-hexane	3322-93-8
91	1,4,5,8-Tetrachloronaphthalene	3432-57-3
92	1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methylbutane -1-sulphonamide	34454-97-2
93	2,3,6,7-Tetrachloronaphthalene	34588-40-4
94	Heptabromobiphenyl	35194-78-6
95	hexabromo-1,1-biphenyl	36355-01-8
96	Tribromo-neopentyl-alcohol	36483-57-5
97	Hexabromodiphenyl ether	36483-60-0
98	1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonyl fluoride	375-72-4
99	1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonic acid	375-73-5

100	TBBA-dimethyl-ether	37853-61-5
101	Tetrakis(2-chloroethyl)dichloroisopentyldiphosphate	38051-10-4
102	Pentabromo-benzyl bromide	38521-51-6
103	Tetrabromo-bisphenol S	39635-79-5
104	TBBA-epichlorhydrin oligomer	40039-93-8
105	Tetrabromobiphenyl	40088-45-7
106	Tetrabromodiphenyl ethers	40088-47-9
107	TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
108	TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
109	Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
110	Tribromodiphenyl ether	49690-94-0
111	1,2,4-Trichloronaphthalene	50402-51-2
112	1,2,3-Trichloronaphthalene	50402-52-3
113	1,3,5-Trichloronaphthalene	51570-43-5
114	1,2,6-Trichloronaphthalene	51570-44-6
115	1,2,4,6-Tetrachloronaphthalene	51570-45-7
116	Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
117	Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
118	1,2,3,5-Tetrachloronaphthalene	53555-63-8
119	1,3,5,7-Tetrachloronaphthalene	53555-64-9
120	1,2,3,5,7-Pentachloronaphthalene	53555-65-0
121	Bis(methyl)tetrabromo-phthalate	55481-60-2
122	1,2,5-Trichloronaphthalene	55720-33-7
123	1,2,7-Trichloronaphthalene	55720-34-8
124	1,2,8-Trichloronaphthalene	55720-35-9
125	1,3,6-Trichloronaphthalene	55720-36-0
126	1,3,7-Trichloronaphthalene	55720-37-1
127	1,3,8-Trichloronaphthalene	55720-38-2
128	1,6,7-Trichloronaphthalene	55720-39-3
129	2,3,6-Trichloronaphthalene	55720-40-6
130	1,2,3,7-Tetrachloronaphthalene	55720-41-7
131	1,3,6,7-Tetrachloronaphthalene	55720-42-8
132	1,4,6,7-Tetrachloronaphthalene	55720-43-9
133	Pentabromophenyl	56307-79-0
134	Poly tribromo-styrene	57137-10-7
135	1,2,3,4,5,6,7-Heptachloronaphthalene	58863-14-2
136	1,2,3,4,5,6,8-Heptachloronaphthalene	58863-15-3
137	1,2,3,4,5,6-Hexachloronaphthalene	58877-88-6

138	Tetra-decabromo-diphenoxy-benzene	58965-66-5
139	Tribromobiphenyl	59080-34-1
140	Hexabromobiphenyl	59080-40-9
141	Vinylbromide	593-60-2
142	Pentabromo-benzyl-acrylate, monomer	59447-55-1
143	Pentabromo-benzyl-acrylate, polymer	59447-57-3
144	Polybrominated Biphenyls	59536-65-1
145	Tribromo-bisphenyl-maleinimide	59789-51-4
146	Pentabromo-phenol	608-71-9
147	Octabromobiphenyl	61288-13-9
148	Tribromo-styrene	61368-34-1
149	2,4-Dibromo-phenol	615-58-7
150	Alkanes, chloro	61788-76-9
151	Tetrabromo phthalic anhydride	632-79-1
152	Nonabromodiphenylether	63936-56-1
153	1,2,4,8-Tetrachloronaphthalene	6529-87-9
154	Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0
155	1,2,4,5-Tetrachloronaphthalene	6733-54-6
156	Firemaster FF-1	67774-32-7
157	1,2,4,7-Tetrachloronaphthalene	67922-21-8
158	1,2,5,6-Tetrachloronaphthalene	67922-22-9
159	1,2,5,7-Tetrachloronaphthalene	67922-23-0
160	1,2,6,8-Tetrachloronaphthalene	67922-24-1
161	1,2,3,4,5-Pentachloronaphthalene	67922-25-2
162	1,2,3,4,6-Pentachloronaphthalene	67922-26-3
163	1,2,3,4,5,7-Hexachloronaphthalene	67922-27-4
164	1,3-Butadiene homopolymer,brominated	68441-46-3
165	Heptabromodiphenylether	68928-80-3
166	Bromo-/Chloro-paraffins	68955-41-9
167	Poly(2,6-dibromo-phenylene oxide)	69882-11-7
168	TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
169	Naphthalene, chloro derivatives	70776-03-3
170	Alkanes, C12-13, chloro	71011-12-6
171	TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
172	TBPA, glycol-and propylene-oxide esters	75790-69-1
173	Bromo-/Chloro-alpha-olefin	82600-56-4
174	Decabromo-diphenyl-ethane	84852-53-9
175	Alkanes, C10-13, chloro	85535-84-8

176	Pentabromo-toluene	87-83-2
177	1-Chloronaphthalene	90-13-1
178	1,2,4,5,6,8-Hexachloronaphthalene	90948-28-0
179	2-Chloronaphthalene	91-58-7
180	4-Bromobiphenyl	92-66-0
181	Dibromobiphenyl	92-86-4
182	TBBA carbonate oligomer, phenoxy end capped	94334-64-2
183	Dibromo-propanol	96-13-9
184	Tris(2-chloroethyl) phosphate	115-96-8

## 附錄十三：磷系阻燃劑包含下列物質

## Appendix 13: Phosphorus Flame Retardants

項次 Item	有害物質名稱 Substance name	CAS No.
1	磷酸三(2-氯乙基)酯 (TCEP) Tris(2-chloroethyl) phosphate	115-96-8
2	磷酸三(1,3-二氯異丙基)酯 (TDCPP) Tris(1,3-dichloro-2-propyl)phosphate	13674-87-8
3	磷酸三(1-氯-2-丙基)酯 (TCPP) Phosphoric acid tris(2-chloro-1-methylethyl) ester	13674-84-5
4	磷酸三苯酯 (TPP) Triphenyl phosphate	115-86-6
5	磷酸三(二甲苯)酯 (TXP) TRIXYLYL PHOSPHATE	25155-23-1
6	2,2-雙氯甲基-三亞甲基-雙[雙(2-氯乙基)磷酸酯] (V6) 2,2-bis(chloromethyl)trimethylene bis(bis(2-chloroethyl)phosphate)	38051-10-4
7	磷酸三(4-叔丁基苯)酯 (TBPP) TRI-(P-TERT-BUTYLPHENYL) PHOSPHATE tris(tert-butylphenyl) phosphate	78-33-1 28777-70-0
8	磷酸 4-叔丁基苯二苯酯 (MDPP) tert-Butylphenyl diphenyl phosphate	56803-37-3
9	磷酸二(4-叔丁基苯基) 苯基酯 (DBPP) di-tert-butylphenyl phenyl phosphate	65652-41-7
10	磷酸三丁酯 (TBP) Tributyl phosphate	126-73-8
11	磷酸三甲酯 (TMP) Trimethyl phosphate	512-56-1
12	三(1-氯丙啶基)氧化磷(TEPA) TEPA	545-55-1
13	磷酸三甲苯酯 (TCP) Tricresyl Phosphate	1330-78-5
14	磷酸三鄰甲苯酯(TOCP) Tri-o-cresyl Phosphate	78-30-8
15	磷酸三辛酯 (TEHP) Tris(2-ethylhexyl) phosphate	78-42-2
16	磷酸三(2,3-二氯丙基)酯	78-43-3

	Tris(2,3-dichloropropyl) phosphate	
17	磷酸三乙酯(TEP) Triethyl phosphate	78-40-0
18	磷酸三間甲苯酯 Tri-m-Tolyphosphate	563-04-2
19	磷酸三對甲苯酯 Tri-p-Tolyphosphate	78-32-0
20	磷酸三(丁氧基乙)酯 (TBEP) Tris(2-butoxyethyl) phosphate	78-51-3
21	二(2,3-二溴丙基)磷酸酯 Bis-(2,3-dibromopropyl)phosphate	5412-25-9
22	三(二溴丙基)-磷酸酯 (TDBPP) Tris(2,3-dibromopropyl)phosphate	126-72-7