



☐ Manual ☐ Procedure ☐ WI ☒ Spec. ☐ Engineering Doc ☐ Company Regulation

Confidential Level ☐ A ☒ B ☐ C

Title: Environmental Restricted Substance Control Standard
環境限用物質管制標準

Established Dept: 品保單位 QA

Doc. No: SQS1-0001

Rev.: K

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Rev.	Description	Editor	Co-Sign Date	Effective Date	Issue Date
A	新制訂 New initial	陳益光	Jan 12,2009	Feb 03,2009	Feb 03,2009
B	新增<附錄一>環境限用物質鹵素(Halgen) Added Halogen to Appendix 1	郭淑鳳	Mar 24,2009	Mar 26,2009	Mar 26,2009
C	修訂#7.1.1 環境限用物質 Modified #7.1.1 Environmental restricted substance	朱國華	May 22,2009	Jun 03,2009	Jun 03,2009
D	修訂#7.1.1 環境限用物質項目 Modified #7.1.1Environmental restricted substance	朱國華	Jul 24,2009	Aug 12,2009	Aug 12,2009
E	修訂 7.1.1 環境限用物質項目 Modified Environmental restricted substance	林維彥	Nov 11,2009	Dec 01,2009	Dec 01,2009
	1. 新增溴&氯為必要管制對象 Added Bromine and Chlorine as the necessary control item				
	2. 新增附錄一環境限用物質內容(鹵素、二氯化鈷、特定苯並三氮唑、PVC、甲醛、氧化鋁、放射性物質、特定鄰苯二甲酸鹽、氫氟碳化物;全氟化碳、富馬酸二甲酯、特定胺化合物) Added Appendix 1 Environmental restricted substance				
	3. 將附錄一(各物質編號、金屬換算系數)表頭刪除 Removed Appendix 1 of table title				
F	依據國際法令規範內容與客戶自訂之環境限用物質項目要求更新如下 According to the International regulations and Customer requirements update as below 新增附錄一環境限用物質內容 Added Appendix 1 Environmental restricted substance 新增附錄二環境管理物質內容 Added Appendix 2 Environmental management substance 新增附錄三 ODS 物質內容 Added Appendix 3 ODS substance	林維彥	Jul 08,2010	Jul 19,2010	Jul 19,2010
G	依據國際法令規範內容與客戶自訂之環境限用物質項目要求更新如下 According to the International regulations and Customer requirements update as below 修訂 7.1.1 濃度限值 Modified 7.1.1 control limit 新增附錄一、二、三物質內容 Added Appendix 1、2、3 substance	林維彥	Jul 05,2011	Jul 14,2011	Jul 14,2011
H	依據國際法令規範內容與客戶自訂之環境限用物質項目要求更新如下 According to the International regulations and Customer requirements update as below 新增附錄一、二、三物質內容 Added Appendix 1、2、3 substance	林維彥	Sep 05,2012	Sep 13,2012	Sep 13,2012
I	依據國際法令規範內容與客戶自訂之環境限用物質項目要求更新如下 According to the International regulations and Customer requirements update as below 新增附錄一、二物質內容 Added Appendix 1、2 substance	林維彥	Sep 09,2013	Sep 11,2013	Sep 11,2013

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J	依據國際法令規範內容之環境限用物質項目要求更新如下 According to the International regulations and Customer requirements update as below 1. 7.1.1 新增 4 項 RoHS 管制物質(鄰苯二甲酸二酯、鄰苯二甲酸丁酯苯甲酯、鄰苯二甲酸二丁酯、鄰苯二甲酸二異丁酯) Added 4 RoHS restricted substance to #7.1.1 2. 7.1.1 修訂 RoHS 管制物質限值 Modified #7.1.1 RoHS restricted substance limited value 3. 7.1.1 新增環境限用物質參考法規 Added Reference regulation to #7.1.1 4. 備註說明 新增第 2 項 Added item 2 to #Remark	莊振武	Jul 13,2015	Jul 15,2015	Jul 15,2015
K	全文修訂	宋亦峯	Feb 12,2020	Feb 17,2020	Feb 17,2020

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1.0 PURPOSE 目的

定義智晶光電之所有產品的環境限制物質的管制方法，滿足國際環境法規和客戶要求。提供一個無有害物質管控的要求，使各供應商及智晶光電內部團隊有所依循，以達到對各無有害物質使用於產品的有效管控、防止含有害物質的各類材料流入或被使用。

To define the control method of environmental restricted substance for all products of Wisechip to meet international environmental regulations and customer requirements.

Provide a requirement for Hazardous Substances Free (HSF) substance control, so that Wisechip team and suppliers will follow it to achieve effective control and prevent of HSF substance used in the product.

2.0 SCOPE 範圍

2.1 本公司生產銷售產品。

All of product manufactured and sold by Wisechip.

2.2 構成本公司產品之各項原物料、包裝材、副資材、治具。

Materials, components as part, packaging materials, auxiliary materials and tooling of product.

2.3 本公司委託外包商之產品及材料。

Materials, components and product from subcontractor.

2.4 運送與保護產品至客戶端所需之包裝材。

Packing materials for the purpose to protect product and deliver to customer.

3.0 RESPONSIBILITY 權責

3.1 品質系統單位：

Quality System Function :

3.1.1 匯整歐盟法規與客戶對於產品環保性要求/規範/指令，解讀並傳遞至相關部門。

To collect European RoHS regulations and Customer requirements and explain, inform to related functions.

3.1.2 根據歐盟法規及客戶環保要求制訂本公司之環境管理物質標準。

To define this Environmental Restricted Substance Control Standard base on European RoHS regulations and Customer requirements of Wisechip.

4.0 DEFINITION 名詞定義

4.1 歐盟 RoHS 有害物質限制指令：European RoHS (Restriction of Hazardous Substances) Directive。〔 (2011/65/EU) and latest (EU)2015/863 〕。

4.1.1 限制物質包含：Restriction of Hazardous Substances contain：Lead、Mercury、Cadmium、Chromium VI、

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Polybrominated Biphenyls (PBBs) 、Polybrominated Diphenyls Ethers (PBDEs) 、(Bis(2-ethylhexyl)phthalate, DEHP) 、(Dibutyl phthalate, DBP) 、(Butyl benzyl phthalate, BBP) 、(di-isodecyl phthalate, DIDP) 。

4.2 REACH 法規：Directive of REACH:

歐盟關於化學品註冊、評估、授權和限制法規(EC)1907/2006(REACH) 。

(EC)1907/2006(REACH) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.

4.3 包材與包材廢棄物指令 (Directive 94/62/EC)：鉛、鎘、汞、六價鉻。

Directive of Packing (Directive 94/62/EC)： Pb 、 Cd 、 Hg 、 Cr6.

4.4 無鹵素：Halogen-free(HF)：

鹵素的限制應用於氯、溴。Halogen restrictions apply to Bromine, Chlorine.

4.5 SONY_SS-00259：與環境有關的物質（受控物質）。

Sony Technical Standard, SS-00259："Environment-related Substances to be Controlled ('Controlled Substances')".

4.6 California Proposition 65，The Safe Drinking Water and Toxic Enforcement Act：美國加州第 65 號法案，「安全飲用水及有毒物質法案」。Officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986.

4.7 POPs：歐盟持久性有機汙染物指令。Persistent Organic Pollutants (POPs) REGULATION (EU)2019-1021 。

4.8 無有害物質(HSF)：Hazardous Substances Free

4.9 均質材料 Homogenous material：指不能用機械分離成不同物質的材料。

A material of composition throughout that cannot be mechanically separated into different materials.

4.10 機械分離方法包括切割，破碎，粉碎和研磨過程。

Methods of mechanical separation include cutting 、crushing 、grinding 、and abrasive processes.

4.11 故意添加物質 Intentionally added Substance

為了改變材料或產品的物理或化學特性(如改變外觀、顏色、耐火性、抗化學性、導電性、強度)而在製造過程中故意添加，且添加後該物質會持續存在於產品或材料中。

To change a product's or material's physical or chemical characteristics (external feature, color, increased fire resistance, chemical resistance, conductivity, strength, etc), a substance is added intentionally during the manufacturing process. Upon being added, the substance will continue to exist in the product or material.

4.12 Threshold level 指在一均質材料中所允許含有該物質的最大濃度值。

It is defined as the maximum acceptable concentration value for the substance contained in a homogeneous material.

4.13 PPM: 百萬分之一。1ppm = 1mg / kg = 0.0001weight(重量)%。

Parts per million, unit of measurement for concentration. 1 ppm = 1 mg/kg = 0.0001 % by weight.

4.14 Not Detected(N.D.)：樣品中受測物質的濃度低於標準分析技術的最低可檢測極限。

The concentration of a tested substance in a sample is less than the lowest detectable limit of standard analytical techniques.



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4.15 含有：意指無論是否有意，所有在產品的部件、設備或使用的材料中添加、填充、混入或黏附的物質。（包括在加工過程中無意混入或黏附於產品中的物質。）

Contained is a situation in which a substance is added to, is blended with, fills up, or adheres to. (When a substance is unintentionally contained in, or added to a product in processing process, this situation is also regarded as "Contained".)

4.16 雜質：雜質是指能夠滿足以下任一個或兩個條件的物質：

包含在天然材料中，作為工業材料使用，在精製過程中技術上不能完全去除的物質（例如自然的雜質）；合成反應過程中產生，而在技術上不能完全去除的物質。

Impurity: An "Impurity" is a substance that satisfies either or both of the following conditions:

One contained in a natural material, which can not technically be removed in a refining process totally (i.e. Natural impurities); and One generated in a synthesis process, the total removal of which is technically impossible.

4.17 原物料：泛指生產用之物料(BOM)

Raw materials：Means Bill of Materials for production.

4.18 副資材：製程中所使用之耗材及不隨產品出貨之用料。

Sub-materials：Sub-Material are materials or stuff used or consumed during manufacturing process without shipped with the product.

4.19 包裝材：儲存及運送過程中，用以保護、裝卸及標示所使用之材料。

Packaging materials：It is defined as the material used for protecting, loading and unloading, and labeling WSI products during the storage and transportation processes.

4.20 治具：生產過程中，輔助生產順利進行，而訂做的工具。

Tooling：A tool that assists in the smooth production of the production process.

5.0 REFERENCE 參考資料

5.1 環境限用物質管理程序書（PQS1-0012）

Environmental Restricted Substance Management Procedure（PQS1-0012）

6.0 PRECAUTION 注意事項

N/A

7.0 CONTENT 作業內容

7.1 管制標準 Control Standard

本公司依據歐盟法規規定及客戶之產品環境管制物質要求，制定相關標準，請供應商確保可以完全符合，並將相關規定落實於有害物質管理流程內。當客戶有自訂之環境禁用物質項目及限值時，則須符合客戶

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要求。

WSI define relation Standard specification in accordance with EU regulations and customers' environmentally controlled substances requirements, to ensure full compliance and implement relevant regulations in the process system by suppliers.

Once customers have there own prohibited substances and limited value of environment, it shall be comply with customer requirements.

7.1.1 物質管理等級：(Substance Mangement Class)

7.1.1.1 禁用物質清單：Prohibited substances List

7.1.1.1-A 列表的禁用物質，不但立即禁止使用，且供應商必須同時提供測試報告。

Prohibited substances on 7.1.1.1-A list to this class are not only banned immediately for use but also need to be accompanied with the relevant testing report from supplier.

7.1.1.2 管制物質清單(環境相關物質的管理)：Controlled Substances List (Environment-related Substances to be Controlled)

7.1.1.2-A 列表的管制物質，限制使用在提供智晶的材料零部件中，供應商須誠實以自我宣告的方式說明有無含有該物質成分；一旦發現異常，智晶或其客戶要求供應商時須提出相關測試報告。

Controlled substances on 7.1.1.2-A list to this class are restricted of in WiseChip's products. The supplier must honestly declaration whether or not contains the substance.If there are customer requirements for test report of abnormal issue happened in the future, the suppliers must provide relation testing report to analysis.

7.1.1.3 減少使用量物質清單 (Reduce Use substances List)

當此物質另外註明為” 需減少使用量” 及 7.1.1.3-A 減少使用量列表物質，雖不禁用，但供應商應盡量避免使用，如有目前必須使用之考量，也必須做到逐步減少使用之動作。報告過程的目的是減少這些物質的使用，並敦促供應商在商業和技術上可行的情況下用環保物質代替它們。

If the substance with a “Reduce Use” in remark column or substances on 7.1.1.3-A list, WSI not restrict, but suppliers need to reduce use it as possible and draw up a phase out plan. The purpose of the reporting process is to reduce the use of these substances and urge suppliers to replace them with eco-friendly substances if commercially and technically viable.

7.1.1.4 排外(Exemption)

7.1.1.4.1 不受禁用等級 7.1.1.1、7.1.1.2 的限制，原因還在於法律豁免。必要時進行物質及其應用的技術調查和監測。

Not subject to Prohibited 7.1.1.1 and 7.1.1.2 because of reasons also being reflected by exemptions from laws. Technical investigations and monitoring of substances and their applications are conducted as necessary.

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7.1.1.4.2 參考排外清單 Appendix 36。Please refer Exemption list Appendix 36.

若有最新物質訊息請參照網頁：

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011L0065>

Please refer to the website for the latest substance information：

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011L0065>

7.1.1.1-A 禁用物質清單：Prohibited substances List：Directive of RoHS

項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level
1	鉛及鉛化合物 Lead and its compounds	Reference Table 1	All application	<100 ppm
			In plastics, cables, paint, ink etc. including PVC.	<50 ppm
2	鎘及鎘化合物 Cadmium and its compounds	Reference Table 2	All application	<5ppm
3	汞及汞化合物 Mercury and its compounds	Reference Table 3	All application	N.D.
			Plastic (including rubber), paint, ink and other organic materials.	Banned
4	六價鉻及六價鉻化合物 Chromium VI and its compounds	Reference Appendix 18	Metallic parts、Surface plating	Banned
			Plastics	<10ppm
5	Polybrominated Biphenyls (PBBs) 多溴聯苯及其化合物	Reference Appendix 1	All application	<100 ppm
6	Polybrominated Diphenyls Ethers(PBDEs) 多溴聯苯醚及其化合物	Reference Appendix 2		<100 ppm
7	鄰苯二甲酸(2-乙基己基酯) (DEHP) Bis(2-ethylhexyl)phthalate	117-81-7		<400ppm
8	鄰苯二甲酸二丁酯 (DBP) Dibutyl phthalate	84-74-2		<400ppm
9	鄰苯二甲酸丁苯酯 (BBP) Benzyl butyl phthalate	85-68-7		<400ppm
10	鄰苯二甲酸二異丁酯 (DIBP) Diisobutyl phthalate	84-69-5		<400ppm

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7.1.1.1-A 禁用物質清單：Prohibited substances List：包材與包材廢棄物指令 Directive of Packaging Materials

項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level
1	鉛及鉛化合物 Lead and its compounds	Reference Table 1	All application	(Pb+Cd+Hg+Cr 6+)<80 ppm , *且鎘(Cd)的濃度需為 N.D.不得檢出。 Cadmium concentration Not detected (N.D.).
2	鎘及鎘化合物 Cadmium and its compounds	Reference Table 2		
3	汞及汞化合物 Mercury and its compounds	Reference Table 3		
4	六價鉻及六價鉻化合物 Chromium VI and its compounds	Reference Appendix 18		

7.1.1.1-A 禁用物質清單：Prohibited substances List：Directive of Halogen-free(HF)

項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level
1	氯 Chlorine	7782-50-5	All application	Cl<750ppm ; Br<750 ppm ; Cl+Br<1500 ppm
2	溴 Bromine	7726-95-6		

7.1.1.1-A 禁用物質清單：Prohibited substances List：PFOS/ PFOA Substances

項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level
1	全氟辛烷磺酸相關物質 Perfluorooctane sulfonic acid (PFOS)	1763-23-1	All application	Banned (M.D.L.=10ppb)
2	全氟辛酸及其鹽類與酯類 Perfluorooctanoic acid (PFOA)	335-67-1		Banned (M.D.L.=10ppb)

7.1.1.2-A 管制物質清單：Controlled Substances List

Directive of REACH	智晶光電(WSI)致力於向我們的客戶提供攸關我們的產品是否含有或超過 0.1%重量的任何 REACH 法規最新高度關注物質 (SVHC)、附錄 17、附錄 14 中列出物質的充分信息。因此，供應商必須向智晶光電披露與 SVHC 相關的信息、及遵守附錄 17、附錄 14 的規定。 WSI is committed to providing our clients with sufficient information on whether our products contain or more than 0.1% by weight of any substances listed in the Restricted by Annex XVII、Authorization by Annex XIV and latest Substances of Very High Concern (SVHC) of REACH regulation. Therefore, suppliers are required to disclose
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		information related to SVHC to WSI and need to comply with Annex XVII、Annex XIV. REACH -ECHA Website: http://echa.europa.eu/web/guest/candidate-list-table 、 https://echa.europa.eu/substances-restricted-under-reach 、 https://echa.europa.eu/authorisation-list			
項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level	法規/來源 Regulation/Source
1	Polychlorinated biphenyls (PCBs) and specific substitutes	76253-60-6 1336-36-3 81161-70-8 99688-47-8 12767-79-2 11096-82-5 27323-18-8 11097-69-1 26140-60-3 7012-37-5 35693-99-3 37508-00-6 37680-73-3 35065-28-2 35065-27-1 35065-29-3	All application	Banned	C.R./REACH-X VII/SS-00259
2	Polychlorinated naphthalenes and specific substitutes (PCNs)	Appendix 33	All application	Banned	C.R./REACH-X VII/SS-00259/ POPs Annex I
3	Polychlorinated terphenyls (PCTs)	61788-33-8 12767-79-2 11096-82-5 27323-18-8 11097-69-1 26140-60-3	All application	Banned	C.R./REACH-X VII/SS-00259
4	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8 108171-26-2 71011-12-6 61788-76-9 64754-90-1 18993-26-5 36312-81-9 85422-92-0	All application	Banned	C.R./REACH-X VII/SS-00259

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		85536-22-7 85681-73-8 97553-43-0			
5	聚氯乙烯(PVC)及其混合物。Polyvinyl chloride (PVC)。	9002-86-2 Reference Appendix 3	All application	Banned。 Chlorine source is from PVC(Chlorine <750ppm)。	REACH-XIV/SS-00259/CR
6	Tris(1-chloro-2-propyl) phosphate (TDCPP)	13674-84-5, Synonym: Tris(2-chloro-1-methylethyl) phosphate	All application	Banned	C.R./REACH-XVII/SS-00259
7	Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8	All application	Banned	C.R./REACH-XVII/SS-00259
8	Fluorinated greenhouse gases (PFC, SF6, HFC)	Appendix 4	All application	Banned	C.R./REACH-XVII/SS-00259
Exemption: SF6 incorporated into surge absorber in power unit for projector					
	Ozone depleting substances (ODS)	Appendix 4	All application	Banned	REACH-XVII/SS-00259/C.R.
9	Volatile Organic Compounds (VOCs) 易揮發有機化合物	-	All application	Banned	C.R./ EU directive 94/63/ec, 2004/42/EC, 2010/75/EU, 1999/13/EC。
註:此類物質禁用於生產製程，供應商嚴禁供貨給智晶光電此類禁用物質。 Note: These substances are prohibited in manufacturing process and it is strictly forbidden for suppliers to supply prohibited substances to WSI.					
10	Tri-substituted organostannic compounds	including tributyltin (TBT) compounds and triphenyltin (TPT) compounds	All application	Banned	REACH-XVII/SS-00259
11	Dibutyltin(DBT) compounds	-	All application	Banned	REACH-XVII/SS-00259
	Exemption	-Packaging components and materials for parts and devices, which are reused and not provided to the consumer. -Packaging components or materials for devices, semiconductors, and any other components.			
12	Methyl bromide 甲基溴、溴化甲烷	74-83-9	Packaging Materials	Banned。	CR

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13	Cobalt dichloride 二氯化钴	7646-79-9 7791-13-1 14216-74-1	All application	Banned	REACH-XVII/SS -00259
14	Asbestos and its Compounds	Appendix 5	All application	Banned	REACH-XVII/SS -00259
15	Formaldehyde 甲醛	50-00-0	All application	Banned	C.R./REACH-X VII/SS-00259
16	2-benzotriazol-2-yl-4,6- di-tert-butylphenol (UV-320)	3846-71-7; 94109-79-2 Synonym: "Phenol, 2-(2H-benzotria zol-2-yl)-4,6-bi s(1,1-dimethyle thyl)-", "2-(3',5'-Di-tert -butyl-2'-hydro xyphenyl)benzo triazole"	All application	Banned	REACH-SVHC/S S-00259
17	Dimethyl fumarate (DMF)	624-49-7 68-12-2	All application	Banned	C.R./REACH-X VII/SS-00259
18	Brominated flame retardants (BFRs)	Appendix 6	All applications . Bromine(Br) in the form of Brominated flame retardants(BFRS)	Banned . Br<750ppm	REACH-XVII/SS -00259
19	Chlorinated flame retardants (CFRs)	Appendix 6	All applications . Chlorine(Cl) in the form of Chlorinated flame retardants (CFRS)	900 ppm	REACH-XVII/SS -00259
20	Perchlorates	Appendix 7	All applications except battery	Banned	C.R./ REACH-XVII/SS -00259
21	Radioactive substances	Appendix 8	All applications	Banned	C.R./REACH-X VII/SS-00259
22	Decabromodiphenyl ether (commercial mixture, c-decaBDE	-	All applications	Banned	POPs Annex I
23	Hexabromobiphenyl	36355-01-8	All applications	Banned	POPs Annex I A/C.R.
24	Pentachlorobenzene (PeCB)	608-93-5	All applications	Banned	POPs Annex I
25	Tetrabromodiphenyl ether and Pentabromodiphenyl	40088-47-9 32534-81-9	All applications	Banned	POPs Annex I/CR

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	ether				
26	Hexabromocyclododecane (HBCDD)	Appendix 9	All applications	Banned	SS-00259 / POPs Annex I / EU REACH Regulation (EC) No 1907/2006
27	Hexachlorobutadiene ;1, 1,2,3,4,4-hexachlorobuta-1,3-diene(HCBD)	87-68-3	All applications	Banned	C.R./ POPs Annex I
28	Hexabromodiphenyl ether 六溴聯苯醚 and heptabromodiphenyl ether 七溴聯苯醚	36483-60-0、68928-80-3	All application	Banned	POPs Annex I
29	Perfluorooctane sulfonic acid, (PFOS)its salts and perfluorooctane sulfonyl fluoride (PFOSF)& Perfluoroalkyl sulfonates (PFASs)	Appendix 14	All application	Banned	POPs Annex I
30	Halogenated Dioxins & Furans	Appendix 10	All application	Banned	C.R./POPs Annex I
31	Di- μ -oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate (DBB)	75113-37-0	All application	100 ppm	C.R./REACH-XVII
32	2,4,6-Tri-tert-Butylphenol	732-26-3	All application	Banned	C.R.
33	4-Nitrobiphenyl	92-93-3	All application	Banned	C.R.
34	Alkylphenols	25154-52-3 27193-28-8 9016-45-9 9002-93-1 123-01-3	All application	Banned	C.R.
35	Benzene	71-43-2	(1) Manufacturing process is restricted to use (2) All applications except item (1)	Banned	C.R.
36	Chlorinated Hydrocarbons	Appendix 11	All application	Banned	C.R.
37	Coal Tar Distillates, heavy oils	90640-86-1 292-607-4	All application	1000 ppm	C.R.

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38	Coal Tar Distillates, heavy oils, pyrene fraction	91995-42-5 295-304-5	All application	1000 ppm	C.R.
39	Coal Tar Distillates, pitch, pyrene fraction	91995-52-7 295-028-2	Wood	Banned	C.R.
40	Coal Tar Residues, pitch distn	92061-94-4 295-507-9	All application	1000 ppm	C.R.
41	Creosote, coal tar, tar oils, anthracene substances	8001-58-9; 65996-91-0; 122384-78-5; 90640-80-5 8021-39-4 65996-93-2 8002-29-7 120-12-7	All application	Banned	C.R.
42	Cyclohexane	110-82-7	Adhesive	Banned	C.R./ REACH-XVII
43	Diphenylether, octabromo derivative (C ₁₂ H ₂ Br ₈ O)	32576-61-7 32536-52-0	All application	1000 ppm	C.R.
44	Halogenated Diphenyl Methanes	Appendix 12	All application	Banned	C.R.
45	Hexachlorobenzene	118-74-1	All application	Banned	C.R./POPs Annex I
46	Hexachlorocyclohexane isomers (HCH)	58-89-9 608-73-1 319-84-6 319-85-7	All application	Banned	C.R.
47	Kelthane	115-32-2	All application	Banned	C.R./POPs Annex I
48	Methyl chloroform	74552-83-3 71-55-6	All application	Banned	C.R.
49	Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers(DBBT)	99688-47-8	All application	Banned	C.R./REACH-XVI I/Sony 00259
50	N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine	27417-40-9 28726-30-9 70290-05-0 620-91-7 15017-02-4	All application	Banned	C.R.

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51	Nonylphenol/ethoxylates (NP/NPEs) and related substances 壬基酚/壬基酚乙醇酯	Appendix 13	All application	Banned	C.R.
52	Organic Tin compounds	Appendix 15	All application	Banned	C.R.
53	Toluene 甲苯	108-88-3	All application	100ppm	C.R./REACH-XVII
54	Yellow Phosphorus	12185-10-3	Prohibit use in flame retardant	Banned	C.R.
55	Tri-o-cresyl phosphate or Tricresyl phosphate (TCP)	1330-78-5	All application	Banned	C.R.
56	Chlorinated paraffins Medium-chained(C14-17) MCCP	85535-85-9	All application	Banned	C.R.
57	Chlorinated paraffins Long-chain(C18-30) LCCP	- Appendix 36	All application	Banned	C.R.
	Long-chain(C18-28)	85535-86-0			
58	Nitrogen trifluoride (NF3)	7783-54-2	Preparations and articles	Banned	C.R./SS-00259
59	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	All application except rubber products, but rubber tires need to be controlled	Banned	C.R.
60	n-Hexane	110-54-3	Cleaning agent and degreaser in manufacturing process	Banned	C.R.
61	Beryllium Dust and Fumes	-	(1) manufacturing process (2) Metals and metal plating, glass and ceramics	(1) 0.0002 mg/m ³ (2) 1000 ppm	C.R.
62	Antimicrobial and/or Biocidal substances	Appendix 16	All application	Banned	C.R.
63	Diphenylamine, Substituted (SDPA)	(SDPA)122-39-4 101-67-7 4175-37-5 10081-67-1 15721-78-5 24925-59-5	used in adhesives, resins, polymer coating, paper products	Banned	C.R.

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		26603-23-6 27177-41-9 36878-20-3 68411-46-1 68442-68-2 68608-77-5 68608-79-7 184378-08-3			
64	Chlorine bleaching agent/Chlorinated Organic Solvents	-	All application	Banned	C.R.
65	Chlorinated benzene	Appendix 17	All application	Banned	C.R.
66	2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3	All application	1000 ppm	C.R./REACH-XVI I
67	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5	All application	1000 ppm	C.R./REACH-XVI I
68	Phenol, n-methyl-	95-48-7 106-44-5 108-39-4 1319-77-3	All application	Banned	C.R.
69	Benzidine-Based Dyes	Appendix 19	All application	Banned	C.R.
70	N-Methylpyrrolidone (NMP)/1-methyl-2-pyrrolidone	872-50-4	Cleaning agents, degreasers, demolder solutions in all manufacturing processes	(1)Breathing zone< 40 g/m ³ (10 ppm) (2)10 ppm	C.R./REACH-XVII
71	Tetrabromobisphenol A, TBBPA	Appendix 7	All application	Banned	C.R.
72	Red Phosphorus	7723-14-0	Prohibit used in flame retardant	Banned	C.R.
73	Tris-(2,3-dibromo-propyl phosphate) 三 (2,3-二溴丙基) 磷酸酯	126-72-7 25322-68-3	All application	Banned	C.R./ IEC 62474/ REACH-XVII
74	Selenium (Se) and its compounds	Appendix 28	All application	100ppm	C.R./ IEC 62474
75	Ethylene based glycol ethers 乙烯基乙二醇醚	Appendix 29	All application	Banned	C.R.
76	Tris-(1-aziridinyl) phosphineoxide 三吡啶基氧化磷	545-55-1	All application	Banned	C.R./ IEC 62474
77	Cobalt (Co) and its compounds 鈷以及鈷化合物	Appendix 35	All application	N.D.	C.R./ 97/10/EC

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78	Methylenediphenyl diisocyanate 二苯基亞甲基二異氰酸酯	26447-40-5	All application	1000ppm	C.R./REACH-XVII
79	Chromium(III) compounds 三價鉻化合物	-	All application	N.D.	C.R./ 97/10/EC
80	Gallium, elemental only 銻元素	-	All application	N.D.	C.R.
81	Natural rubber	232-689-0	All application	Not Contained	C.R./ REACH
82	Tantalum and compounds 鉭及其化合物	-	Metals & Metal compounds	Banned	C.R.
83	Tellurium and its compounds 碲及其化合物	-	Metals & Metal compounds	1000ppm	C.R.
84	Thallium and its compounds 鉍及其化合物	-	Metals & Metal compounds	1000ppm	C.R.
85	EDTA(Ethylenediamine tetraacetic acid)乙二胺四乙酸	60-00-4	All application	Banned	C.R.
86	2-Butoxyethanol (Ethylene glycol monobutyl ether)乙二醇單丁醚	111-76-2	Paints/Coatings	1000ppm	C.R.
87	2-Naphthylamine 乙萘胺鹽酸鹽	91-59-8 553-00-4 612-52-2	All application	(Prohibited Intentional addition) 。 1000ppm	C.R.
88	P-tert-Octylphenol ; 4-(1,1,3,3-tetramethylbutyl)phenol 對特辛基苯酚	140-66-9	Ink/Raw material	100ppm	C.R./REACH-SVHC
89	Xylenes 二甲苯	1330-20-7	Wood pallet	<0.20mg/m ³	C.R.
90	Hexachloroethane 六氯乙烷	67-72-1	Prohibit used in Non- Iron metal processes	Banned	C.R./REACHXVII
91	Triclosan 三氯沙	3380-34-5	All application	Banned	C.R.
92	Triethylenephosphoramide -TEPA	5455-55-1	All application	Banned	C.R.
93	Phosphorus (P)and its compounds 磷及其化合物	20859-73-8 、 7722-76-1 、 56-38-2 、 298-00-0 、 8022-00-2 、	Prohibit used in flame retardant	1000ppm	C.R.

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		2104-64-5			
94	Chlorinated Solvents 氯溶劑	-	Prohibit used in process	Banned	C.R.
95	Aromatic amines 芳香胺	-	-	3ppm	C.R.
96	Isocyanates 異氰酸鹽類	-	-	Banned	C.R.
97	Polyhalogenated aromatic compounds 多鹵化芳香化合物	-	Electric capacity	50ppm	C.R.
98	Monohalogenated aromatic compounds 單鹵化芳香化合物	-	Electric capacity	500ppm	C.R.
99	IPPD: N-Isopropyl-N'-phenyl-1,4-phenylenediamine	101-72-4	-	Banned	C.R.
100	Ethanol, 2-[(2-aminoethyl)amino] 乙醇, 2-[(2-氨基乙基)氨基]	111-41-1	Coating, Preservative	Banned	C.R.
101	Nanomaterials 納米材料	-	All application	Prohibit intentional addition	C.R.
102	Sulphur 硫	-	Prohibit used in packing	1000ppm	C.R.
103	1,4-Benzendiamine 對苯二胺	-	-	Banned	C.R.
104	Mineral Wool	-	-	Banned	C.R.
105	Synthetic and natural Latex Rubber 合成及天然乳膠橡膠	-	All application	Banned	C.R.
106	Styrenated diphenylamine 苯乙烯化二苯胺	Appendix 30	-	N.D.	C.R./ CEPA1999
107	Lead sulphates	7446-14-2 15739-80-7	-	Banned	C.R.
108	LEAD(II) SULFIDE (PbS)	1314-87-0	-	Banned	C.R./REACH-X VII
109	Lead carbonates	598-63-0 1319-46-6	-	Banned	C.R./REACH-X VII

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110	N,N-dimethyl acetamide (DMAC) N,N-二甲基乙酰胺	127-19-5	All application	100ppm	C.R./SS-00259/ REACH-SVHC
111	Polybrominated dibenzofurans (PBDFS) 溴化二苯並呋喃	-	-	N.D.	C.R.
112	Monobutyltin (MBT)單丁基錫	78763-54-9	All application	0.8ppm	C.R.
113	Tetrachlorophenol(TeCP) 四氯酚	25167-83-3	All application	0.4ppm	C.R.
114	Trichlorophenol(TriCP) 三氯苯酚	25167-82-2	All application	0.4ppm	C.R.
115	Triphenylphosphate (TPP) 磷酸三苯酯	115-86-6	All application	Expose concentration	C.R.
116	Trimethyl phosphate (TMP)磷酸三甲酯	512-56-1	All application	Expose concentration	C.R.
117	Endosulfan Sulfate 硫丹硫酸鹽	1031-07-8	All application	Expose concentration	C.R.
118	Polycarbonate 聚碳酸酯	25037-45-0	Appearance	Banned	C.R.
119	Phosphates 磷酸鹽	Appendix 32	All application	Banned	C.R./REACH-XIV/ SS-00259
120	鎂及其化合物 Magnesium and its compound(Mg)	7439-95-4	All application	1000ppm	C.R.
121	銅及其化合物 Copper and its compound(Cu)	7440-50-8	All application	1000ppm	C.R.
122	鋅及其化合物 Zinc and its compound(Zn)	7440-66-6	All application	Prohibited Intentional addition	C.R.
123	錳及其化合物 Manganese and its compound(Mn)	7439-96-5	All application	Prohibited Intentional addition	C.R.
124	金及其化合物 Gold and its compound(Au)	7440-57-5	All application	Prohibited Intentional addition	C.R.
125	銀及其化合物 Silver and its compound(Ag)	7440-22-4	All application	Prohibited Intentional addition	C.R.
126	鈀及其化合物 Palladium and its compound(Pd)	7440-05-3	All application	Prohibited Intentional addition	C.R.

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127	4-辛基苯酚 4-Octylphenol	1806-26-4	All application	Prohibited Intentional addition	C.R.
128	Isopropyl bromide 異 丙基溴	75-26-3	All application	Prohibited Intentional addition	C.R.
129	2-(2H-1,2,3-benzotriazo 1-2-yl)-4-tert-butylpheno 1 2-(2H-1, 2, 3-苯駢三唑 -2-基)-4-二叔丁基本 酚	1536163-75-3	All application	Prohibited Intentional addition	C.R.
130	2-(2' Hydroxy-3' 5' -(DI-T-Butyl)Phenyl)Be nzotriazole, Phenyl, 2-(2H-benzotriazol-2-y 1)-4,6 bis 2-(3,5-二叔丁基-2-羥 基苯基)苯駢三唑、 2-(2-羥基-3' 5-二叔 丁基苯基)苯駢三唑	3846-17-1	All application	Banned	C.R.
131	Cyanides 氰化物	-	All application	Prohibited Intentional addition	C.R.
132	Ethyl cellulose acetate 乙基纖維素	9004-57-3	All application	Prohibited Intentional addition	C.R.
133	2,2',3,4,4',5,6-Heptachlo robiphenyl	74472-47-2	All application	Banned	C.R.
134	Hexabromobiphenyl 聚溴二苯	59536-65-1	All application	Banned	C.R.
135	Hexabrominatedbipheny 1 聚溴化二苯	67724-32-7	All application	Banned	C.R.
136	Benzidine and benzidine dihydrochloride C12H12N2 and C12H12N2 · 2HCl 聯苯胺和聯苯胺二鹽 酸鹽	-	All application	N.D.	C.R./REACHXV II
137	Polyethylene glycol mono(octylphenyl) ether	9036-19-5	All application	Banned	C.R.
138	Tetrabromobisphenol A bis(2,3-dibromopropyl ether)	21850-44-2	All application	Banned	C.R.
139	2,4,6-Tertiarybutylph enol 2,4,6-三溴苯基丙 烯	-	All application	Banned	C.R.

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140	Toluidine	-	Restricted in adhesives	1000ppm	C.R.
141	2,3,5,6-Tetrachlorophenol 四氯苯酚	935-95-5	All application	1000ppm	C.R.
142	2,3,4,5-Tetrachlorophenol 四氯苯酚	4901-51-3	All application	1000ppm	C.R.
143	Bisphenol-F (4,4'-methylenediphenol)	620-92-8	Adhesive、Plastic、Epoxy	50ppm	C.R.
144	Bisphenol-S (4,4'-sulphonyldiphenol) 雙酚 S	80-09-1	Adhesive、Plastic、Epoxy	50ppm	C.R.
145	N-PROPYL BROMIDE (1-BROMOPROPANE) 1-溴丙烷 (nPB)	106-94-5	All application	1.100ppm 2.minimum detection limit total bromine :50ppm(EN14582)	CR/TSCA
146	Indium phosphide 磷化銦	22398-80-7	All application	Report minimum detectable concentration	C.R.
147	Acetamide 乙酰胺	60-35-5	Solvents、Additives、Stabilizers、Plasticizers	1000ppm	C.R.
148	Limonene ; CINENE 檸檬烯	138-86-3	Solvent	1000ppm	C.R.
149	N-Methyloacrylamide N-(羥甲基)丙烯醯胺	924-42-5	All application	Prohibited Intentional addition	C.R.
150	Barium or its ompounds 鋇	-	Glass、paint、others	100ppm	C.R.
151	Bisphenol F、雙酚 F、Bisphenol S、雙酚 S	-	Epoxy resin,polycarbonate,other plastics	>100ppm need to disclosed. <100ppm no need to disclosed.	C.R.
152	Laws & Regulations : IEC 62474- Need to compliance rule with regulation.				C.R./ IEC 62474
153	Laws & Regulations : Toxic and Chemical Substances-Taiwan (R.O.C.) https://www.tcsb.gov.tw/mp-2.html			Banned	C.R.
154	Laws & Regulations : 致癌性物質 (國際癌症研究中心) (International Agency for Research on Cancer, IARC). 所定義之 Group1 及 Group2A 之致癌物質。 Carcinogenic substances (Group1 and Group2A: defined by IARC International Agency for Research on Cancer, IARC)) ex: CAS No.126-72-7、79-06-1、			Banned	C.R./IARC

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	107-13-1		
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註:Note

1. C.R.=Customer Requirements
2. POPs(Regulation (EU) 2019/1021) : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R1021>
- 3.TSCA =Toxic Substances Control Act. : <http://www.epa.gov/compliance/civil/tsca/tscaenfstareq.html>
4. IEC 62474: <http://std.iec.ch/iec62474>
5. IARC: <https://www.iarc.fr/>

7.1.1.3-A 減少使用量物質清單 (Reduce Use substances List)

項目 Item	化學物質名稱 Substances	CAS 編號 CAS No.	禁用對象 Targets	容許濃度 Threshold level	法規/來源 Regulation/Source
1	Dioctyltin (DOT) compounds	-	Textile and leather articles intended to come into contact with the skin	Banned	REACH-XVII
2	Nickel and nickel compounds	-	Parts and materials for mobile phone, where prolonged skin contact is expected	0.28 ug/cm2/week (release concentration)	C.R./REACH-XVII/SS-00259
			Surface coatings (plating) for the external exposed surface of produce	0.5 ug/cm2/week	
3	Azocolorants and azodyes which form certain aromatic amines	Regarding certain aromatic amines, see Appendix 20	All application	Banned	REACH-XVII/SS-00259
4	Polycyclic aromatic hydrocarbons (PAHs)	Appendix 31	All application	Banned	REACH-XVII/SS-00259/ C.R.
5	Arsenic and its compounds	Appendix 21	All application	1.Wood products(Pallets) 、 paints 、 inks 、 Packaging material: Banned. 2.Glass component (such as LCD display glass):10ppm. 3. Metal<100ppm.	C.R.

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				4. All application except above: N.D.	
6	Mercury and its compounds	-Phenylmercury acetate [62-38-4] -Phenylmercury propionate[103-27-5] -Phenylmercury 2-ethylhexanoate [13302-00-6] -Phenylmercury octanoate[13864-38-5] -Phenylmercury Neodecanoate[26545-49-3]	All application	<100 ppm	C.R./REACH-XVII
7	Antimony and its compounds	Appendix 22	All application	1. Flame retardant material -Banned 2.Ink and coating <60ppm 3.Ceramics 、Glass<700ppm 4. All application except above: <700ppm	C.R./IEC 62474
8	Beryllium and its compounds	Appendix 23	All application	Banned	C.R./REACH-XVII/SS-00259
9	Bismuth and its compounds	Appendix 24	All application	500 ppm	C.R.
10	Bisphenol A	80-05-7	All application	Banned	C.R./IEC62474
11	DHTDMAC, DODMAC/DSDM AC, DTDMAC (Surfactants and its compounds)	Appendix 25	All application	Total 1000ppm	C.R.
12	Expanded polystyrene (EPS)	9003-53-6	All Packaging Materials	Banned	C.R.
13	氣味物質(二甲苯麝香/酮麝香) Fragrance substance (Musk xylene and Musk ketone)	81-15-2 / 81-14-1	All application	Banned	C.R./REACH-XIV
14	Nickel and its Compounds	Appendix 26	All application except components that are intended to come into direct	Banned	C.R.

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			and prolonged contact with the skin		
15	Phthalates Compounds	Appendix 27	All application	All Phthalates are prohibited to be Intentional addition 1.DEHP+DBP+BBP<1000PPM 2.DINP+DIDP+DNO P<1000PPM	CR/CPSIA/REACH/Apple-18P
16	甲烷 Methane (CH ₄)	74-82-8	All application	N.D.	C.R.

註: C.R.=Customer Requirements ° CPSIA : United States CONSUMER PRODUCT SAFETY COMMISSION

7.2 檢測要求：Testing of requirements

7.2.1 物質測試項目要求：Requirement for substance Testing

Material Substance	無機材料 Inorganic material			有機材料 Organic material						其他材料 Other material
	金屬 Metal	玻璃 Glass	陶瓷 Ceramics	化鎳浸金 (註1) Note1	塑料 Plastic 橡膠 Rubber 樹脂 Resin	塗料 Coating 油墨 Ink(註2) Note2	ITO 玻璃 ITO Glass	Driver IC	其他材料 Other	包裝材 Packaging Materials (註3) (Note3)
鉛(Pb)	●	●	●	●	●	●	●	●	●	●
鎘(Cd)	●	●	●	●	●	●	●	●	●	●
汞(Hg)	●	●	●	●	●	●	●	●	●	●
六價鉻(Cr ⁶⁺)	●	●	●	●	●	●	●	●	●	●
多溴聯苯(PBBs)	-	-	-	●	●	●	●	●	●	-
多溴二苯醚(PBDEs)	-	-	-	●	●	●	●	●	●	-
鄰苯二甲酸(2-乙基己基酯) (DEHP)	-	-	-	●	●	●	●	●	●	-
鄰苯二甲酸二丁酯 (DBP)	-	-	-	●	●	●	●	●	●	-
鄰苯二甲酸丁苯酯 (BBP)	-	-	-	●	●	●	●	●	●	-
鄰苯二甲酸二異丁酯 (DIBP)	-	-	-	●	●	●	●	●	●	-
氯(Cl)	-	-	-	●	●	●	●	●	●	●
溴(Br)	-	-	-	●	●	●	●	●	●	●
全氟辛酸銨(PFOA)	-	-	-	●	●	●	●	●	●	-

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全氟辛烷磺酸 (PFOS)	-	-	-	●	●	●	●	●	●	-
砷(As) Arsenic	-	●	-	-	-	-	●	-	-	-
銻(Sb) Antimony	●	-	●	-	-	-	-	●	-	-
鈹(Be) Beryllium	●	-	-	-	-	-	-	●	-	-

註 1(Note1)：化鍍浸金- (Electroless Nickel and Immersion Gold: EN/IG)。

註 2(Note2)：油墨測試注意事項: Remark for Ink testing.

註 2-1：油墨需先乾燥後才測試。

Note2-1：The ink has needed to dry before testing.

註 2-2：油墨必須提出不同顏色的檢測報告。

Note2-2：Should be provide different colors testing report for ink.

註 2-3：油墨若有另外使用稀釋劑，則須提供稀釋劑之測試報告。

Note2-3：If there is diluents used in Ink, it's necessary to provide testing report of diluents.

註 3：所有包裝材料禁止使用發泡聚苯乙烯(俗稱保麗龍)。

Note3：Banned the use of Expanded Polystyrene (EPS) CAS No. 9003-53-6 on all packaging materials.

註 4：客戶提出其他物質檢測要求，如:砷(As)、銻(Sb)、鈹(Be)，供應商則須依照客戶要求提出。

Note4：The suppliers must be provide relation testing report as of Arsenic、Antimony、Beryllium, to satisfy customer requirements.

7.2.2 供應商、外包商委託外部檢測機構進行檢測時，需委託本公司所認可且通過 ISO 17025 之公正檢驗機構。另若有要求亦需提出實驗室認可之證書。

The laboratory should be acquired by ISO 17025 and Wisechip. Otherwise the laboratory shall provide the certification by required.

7.2.3 均質材料的例子是某些類型的塑料，陶瓷，玻璃，金屬，合金，紙張，紙板，樹脂、油墨和塗料。以均質材質進行測試，不可混測。

Homogeneous materials are certain types of plastics, ceramics, glass, metals, alloys, paper, board, resins, ink and coatings. Do not accept the mixed testing.

7.2.3.1 均質材料-例如 1：FPC 可分成：基材、油墨、黏著劑、金屬材、覆蓋膜、加強片、板對板連接器..

等) 或其他均質材料。板對板連接器可分成：塑料(殼)、金屬材、黏著劑或其他等均質材料。

Homogeneous material -Example 1：The FPC can be separated into：Base film、Metal、Ink、Adhesive、Coverlay、Stiffener、Board to Board Connector、Other Homogeneous, etc.

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Board to Board Connector can be separated into : Plastic(Housing)、Metal、Adhesive、Other Homogeneous, etc.

7.2.3.2均質材料-例如 2 : Dry IC-COF 可分成 : IC 主體、金屬材、FPC 或其他均質材料。

Homogeneous material -Example 2 : Dry IC-COF can be separated into : IC body、Metal、FPC、Other Homogeneous, etc.

7.2.3.3均質材料-例如 3 : 偏光片、拉拔膠可分成 : 膜層、黏著劑或其他均質材料。

Homogeneous material -Example 3 : Polarizing Film、Pull Tap can be separated into : Each layer(Polarizing Film)、Adhesive、Other Homogeneous, etc.

7.2.4 化驗報告格式及內容 Chemical Analysis Report Format and Content

7.2.4.1 化驗報告中至少需記載下列事項 :

The chemical analysis report shall at least record the following items :

7.2.4.1.1 樣品描述〈零件名稱、型號等〉

Sample description (component name, code, and other information)

7.2.4.1.2 所使用之前處理方法

Pre-treatment method used

7.2.4.1.3 檢測方法及設備

Test method and equipment.

7.2.4.1.4 檢測實驗室負責人姓名、分析實驗室名稱

Name of test laboratory manager, and name of analysis laboratory.

7.2.4.1.5 收件日期 Sample Receiving Date

7.2.4.1.6 測試期間 Testing Period

7.2.4.1.7 檢測結果 及方法偵測極限〈MDL〉

Test result and Method Detection Limit (MDL) .

7.2.4.1.7.1 檢測結果須考量所有不確定度之因素在內。

The test results shall consider all uncertain factors.

7.2.4.1.8 檢測流程圖 Measurement flow chart.

7.2.4.1.9 樣品圖片 Sample Image

7.2.4.1.9.1 樣品照片需清晰可見樣品的外觀，需拆除樣品外面的包裝材料，例如瓶裝液體需倒出拍照。

For the sample Image, the sample's external features shall be clearly visible. The sample's external packaging materials need to be removed, such as that the bottled liquid needs to be removed for taking the picture.

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7.2.4.2 要求樣品的前處理應該使樣品完全溶解成溶液，因此化驗報告前處理或流程說明中需要明確標示“受測樣品已完全溶解”的字樣。

WSI requests pre-treatment should enable the sample to be fully dissolved into the solution. Therefore, the pre-treatment or flow explanation on the chemical analysis report needs to be clearly labeled with “Testing Sample Fully Dissolved.”

7.2.4.3 在製造過程中，金屬上的防腐蝕塗層禁止使用六價鉻，在供應商提供的第三方測試報告中，需要 Boiling-Water 萃取以確定六價鉻的存在。不接受 Spot-Test 的方式。

Hexavalent chromium is prohibited in corrosion-protected coatings on metal in manufacture process. Boiling water extraction is required for determination the presence of hexavalent chromium in 3rd party test report provided by suppliers. Spot testing is not allowed.

7.2.4.4 所提交的化驗報告須為電子檔原稿，不接受影印、刪修、塗改後之報告。

The submitted chemical analysis report needs to be the original electronic file document. Photocopied, deleted, revised and refurbished reports will not be accepted.

7.2.4.5 化驗報告僅接受中文及英文版內容，其餘版本文件將被退件並要求更新後重新提交。

Only Chinese and English content will be accepted for the ICP testing report.

7.2.4.6 化驗報告不接受樣品混測且不得有混測等字樣說明。

The testing sample can't be accepted for mixing test and it can't be allowed to have mixed description in the chemical testing report.

7.2.4.7 當拆分對象難以進一步拆分，粒徑小於 2mm，或體積 $\leq 4\text{mm}^3$ 時，可不必拆分。

When the Sample to be separation is difficult to further separation, the particle size is less than 2mm, or the volume is $\leq 4\text{mm}^3$, it is not necessary to be separation.

7.2.4.8 測試報告有效期限 Validity Period for the Chemical Analysis Report

7.2.4.8.1 檢附之化驗報告資料，化驗報告時間從收件日起算，一年有效期限。

The expiry date is end of valid for one year when test sample receiving date.

7.2.4.9 對於違反上述要求的化驗報告將被退件並要求補正後重新提交。

The chemical testing report in violation of the above requirements will be returned and requested to be re-submitted after being corrected.

7.2.5 物質安全資料/安全資料表格要求：Material Safety Data Sheets / Safety Data Sheets (MSDS/SDS) Required.

7.2.5.1 需有下列 16 標準部分: Must be have Section sixteen standards.

7.2.5.1.1 部分 1：供應商的基本聯繫信息；Section 1：Identification(It also provides the essential contact information of the supplier.)

7.2.5.1.2 部分 2：危害識別；Section 2：Hazard(s) Identification



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7.2.5.1.3 部分 3：成分/成分信息； Section 3：Composition/Information on Ingredients

7.2.5.1.3.1 本部分在安全資料表上指示的產品中包含的成分，包括雜質和穩定添加劑。

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives.

7.2.5.1.4 部分 4：急救措施； Section 4：First-Aid Measures

7.2.5.1.5 部分 5：滅火的方法； Section 5：Fire-Fighting Measures

7.2.5.1.6 部分 6：意外洩漏措施； Section 6：Accidental Release Measures

7.2.5.1.7 部分 7：處理和儲存； Section 7：Handling and Storage

7.2.5.1.8 部分 8：暴露控制/個人防護； Section 8：Exposure Controls/Personal Protection

7.2.5.1.9 部分 9：物理和化學特性； Section 9：Physical and Chemical Properties

7.2.5.1.10 部分 10：安定性和反應性； Section 10：Stability and Reactivity

7.2.5.1.11 部分 11：毒性資料； Section 11：Toxicological Information

7.2.5.1.12 部分 12：生態資料； Section 12：Ecological Information

7.2.5.1.13 部分 13：廢棄處置方法； Section 13：Disposal Considerations

7.2.5.1.14 部分 14：運送資料； Section 14：Transport Information

7.2.5.1.15 部分 15：法規資料； Section 15：Regulatory Information

7.2.5.1.16 部分 16：其他資料； Section 16：Other Information

本部分說明了何時準備 SDS 或進行了最新的修訂。SDS 可能還會說明對先前版本進行的更改。您可能希望與供應商聯繫以獲取有關更改的說明。其他有用的信息也可能會包含在此處。

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

7.2.5.2 聲稱擁有商業機密的化學品：Chemicals where a trade secret is claimed

7.2.5.2.1 要求提供特定的化學特徵和/或組成的確切百分比（濃度）作為商業秘密的聲明。

A statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

7.2.5.3 參考美國勞工部職業安全與健康管理局：

Reference to Occupational Safety and Health Administration U.S. Department of Labor

網址 URL link：<https://www.osha.gov/Publications/OSHA3514.html>

8.0 Table 表格

8.1 Table 1、Lead and its compounds

8.2 Table 2、Cadmium and its Compounds

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8.3 Table 3、Mercury and its compounds

9.0 APPENDIX 附錄

9.1 Appendix 1 : Polybrominated Biphenyls (PBBs)

9.2 Appendix 2 : Polybrominated Diphenyls Ethers (PBDEs)

9.3 Appendix 3 : Polyvinyl chloride (PVC)

9.4 Appendix 4 : 臭氧層破壞物質(ODS, Ozone Depleting Substance)

9.5 Appendix 5 : Asbestos and its Compounds

9.6 Appendix 6 : Brominated Flame Retardants (BFR) 、Chlorinated flame retardants (CFR)

9.7 Appendix 7 : Perchlorates

9.8 Appendix 8 : Radioactive substances

9.9 Appendix 9 : Hexabromocyclododecane (HBCDD)

9.10 Appendix 10 : Halogenated Dioxins & Furans

9.11 Appendix 11 : Chlorinated Hydrocarbons

9.12 Appendix 12 : Halogenated Diphenyl Methanes

9.13 Appendix 13 : Nonylphenol/ethoxylates (NP/NPEs) and related substances

9.14 Appendix 14 : Perfluorinated compound

9.15 Appendix 15 : Organic Tin compounds

9.16 Appendix 16 : Antimicrobial and/or Biocidal substances

9.17 Appendix 17 : Chlorinated benzene

9.18 Appendix 18 : Chromium VI and its compounds

9.19 Appendix 19 : Benzidine-Based Dyes

9.20 Appendix 20 : Azocolorants and azodyes which form certain aromatic amines

9.21 Appendix 21 : Arsenic and its compounds

9.22 Appendix 22 : Antimony and its compounds

9.23 Appendix 23 : Beryllium and its compounds

9.24 Appendix 24 : Bismuth and its compounds

9.25 Appendix 25 : DHTDMAC, DODMAC/DSDMAC, DTDMAC(Surfactants and its compounds)

9.26 Appendix 26 : Nickel and its Compounds

9.27 Appendix 27 : Phthalates Compounds

9.28 Appendix 28 、Selenium (Se) and its compounds

9.29 Appendix 29 、Ethylene based glycol ethers

9.30 Appendix 30 、Styrenated diphenylamine

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- 9.31 Appendix 31、Polycyclic aromatic hydrocarbons (PAHs)
- 9.32 Appendix 32、Phosphates
- 9.33 Appendix 33、Polychlorinated naphthalenes and specific substitutes (PCNs)
- 9.34 Appendix 34、Chlorinated paraffins Long-chain(LCCP)
- 9.35 Appendix 35、Cobalt (Co) and its compounds
- 9.36 Appendix 36、RoHS Exemption list
- 9.37 Appendix 37、Recommend test method

10.0 RECORD/FORM 表單

N/A

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Table 1、鉛及其化合物 Lead and its compounds

物質名稱 Material	CAS Numbers
Lead	7439-92-1
Lead (II) chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead hydrocarbonate	1319-46-6
Lead acetate	301-04-2
Lead (II) acetate, trihydrate	6080-56-4
Lead phosphate	7446-27-7
Lead selenide	12069-00-0
Lead (IV) oxide	1309-60-0
Lead (II,IV) oxide	1314-41-6
Lead (II) sulfide	1314-87-0
Lead (II) oxide	1317-36-8
Lead hydroxidcarbonate	1344-36-1
Lead (II) phosphate	7446-27-7
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Lead (II) titanate	12060-00-3
Lead sulphate, tribasic	12202-17-4
Lead stearate	1072-35-1
Lead diazide: Lead azide	13424-46-9
Lead tetra fluoroborate	13814-96-5
Lead nitrate	10099-74-8
Lead metasilicate	11120-22-2
Lead hydrogen arsenate	7784-40-9
Tetraethyl lead	78-00-2
Lead styphnate: Lead 2,4,6-trinitro-m-phenylene dioxide	15245-44-0
Lead dipicrate	6477-64-1
Lead(II) fluoride	7783-46-2
Lead(II) chloride	7758-95-4
Lead(IV) chloride	13463-30-4
Lead(II) iodide	10101-63-0
Lead(II) cyanide	592-05-2
Lead(II) fluosilicate	25808-74-6
Lead thiocyanate	592-87-0
Lead(II) metaborate	10214-39-8
Lead silicate	22569-74-0
Lead antimonite	13510-89-9
Lead(II) arsenite	10031-13-7
Lead(IV) acetate / Lead tetraacetate	546-67-8
Lead molybdate	10190-55-3
Tetramethyl lead	75-74-1
Lead stearate	7428-48-0
Lead stearate, dibasic	56189-09-4
Dilead trioxide	1314-27-8

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Lead oleate	1120-46-3
Silicic acid, lead(2+) salt (1:1)	10099-76-0
Calcium plumbate	12013-69-3
Lead (II) phosphate	7446-27-2
Lead(II) oxide	1335-25-7
Other lead compounds	-

Table 2、鎘及其化合物 Cadmium and its Compounds

物質名稱 Material	CAS Numbers
Cadmium (Metal)	7440-43-9
Cadmium oxide	1306-19-0
Cadmium sulfide	1306-23-06
Cadmium chloride	10108-64-2
Cadmium sulfate	10124-36-4
Cadmium carbonate	513-78-0
Cadmium nitrate	10325-94-7
Cadmium nitrate tetrahydrate	10022-68-1
Cadmium stearate	2223-93-0
Cadmium sulfide	8048-07-05
Other cadmium compounds	-

Table 3、汞及其化合物 Mercury and its compounds

物質名稱 Material	CAS Numbers
Chromium (VI) oxide	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Chromium trioxide	1333-82-0
Lead(II) chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Sodium chromate	7775-11-3
Sodium dichromate	10588-01-9
Potassium dichromate	7778-50-9
Potassium chromate	7789-00-6
Zinc chromate	13530-65-9
Sodium bichromate	7789-12-0
Dichromium tris(chromate)	24613-89-6
Pentazinc chromate octahydroxide	49663-84-5
Chromium, ion (Cr6+)	18540-29-9
Chromic acetate	1066-30-4
Lithium chromate	14307-35-8
Potassium chlorochromate	16037-50-6
Ammonium chromate	7788-98-9
Copper chromate	13548-42-0

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Magnesium chromate	13423-61-5
Lead chromate (orange color)	1344-38-3
Dichromium zinc tetraoxide	12018-19-8
Zinc dichromate	14018-95-2
Ammonium dichromate	7789-09-5
Calcium dichromate	14307-33-6
Copper chromite	12053-18-8
Other chromium VI compounds	-

Appendix 1 : Polybrominated Biphenyls (PBBs)

物質名稱 Material	CAS Numbers
Polybrominated Biphenyl	59536-65-1
Dibromobiphenyl	92-86-4
2-Bromobiphenyl	2052-07-5
3-Bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
Tribromobiphenyl	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
Hexabromobiphenyl	59080-40-9
Hexabromo-1,1-biphenyl	36355-01-8
Firemaster FF-1	67774-32-7
Heptabromobiphenyl	35194-78-6
Octabromobiphenyl	61288-13-9
Nonabromobiphenyl	27753-52-2
Decabromobiphenyl	13654-09-6
3,4,5-Tribromodiphenyl	115245-08-4
2,4,6-Tribromodiphenyl	59080-33-0
3,3',4,4',-tetrabromobiphenyl	77102-82-0
2,2',4,5',-tetrabromobiphenyl	60044-24-8
2,2',4,5',6-pentabromobiphenyl	59080-39-6
3,3',4,4',5,5'-Hexabromodiphenyl	60044-26-0
Decabromobiphenyl	13654-09-06
2,2',4,4',5,6'-Hexabromobiphenyl	36402-15-0
2,2',3,3',5,5'-Hexabromobiphenyl	55066-76-7
2,2',4,4',6,6'-Hexabromobiphenyl	59261-08-4
2,2',3,4,4',5'-Hexabromobiphenyl	67888-98-6
2,3',4,4',5,5'-Hexabromobiphenyl	67888-99-7
2,2',3,4',5',6-Hexabromobiphenyl	69278-59-7
2,3,3',4,4',5-Hexabromobiphenyl	77607-09-1
2,2',3,4,4',5-Hexabromobiphenyl	81381-52-4
2,2',3,3',4,4'-Hexabromobiphenyl	82865-89-2
2,2',3,3',4,5'-Hexabromobiphenyl	82865-90-5
2,3,3',4',5',6-Hexabromobiphenyl	82865-91-6
2,3,3',4,4',5'-Hexabromobiphenyl	84303-47-9

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2,3',4,4',5',6-Hexabromobiphenyl	84303-48-0
2,2',3,4',6,6'-Hexabromobiphenyl	93261-83-7
2,2',3,3',4,6'-Hexabromobiphenyl	119264-50-5
2,2',3,3',5,6'-Hexabromobiphenyl	119264-51-6
2,2',3,4,5',6-Hexabromobiphenyl	119264-52-7
2,2',3,5,5',6-Hexabromobiphenyl	119264-53-8
2,2',3,4,5,5'-Hexabromobiphenyl	120991-47-1
2,3,3',4,5,5'-Hexabromobiphenyl	120991-48-2

Appendix 2 : Polybrominated Diphenyls Ethers (PBDEs)

物質名稱 Material	CAS Numbers
Bromodiphenyl ether	101-55-3
Dibromodiphenyl ether	2050-47-7
Tribromodiphenyl ether	49690-94-0
Tetrabromodiphenyl ether	40088-47-9
Benzene, 1,1'-oxybis-,pentabromo deriv.	32534-81-9
Hexabromodiphenyl ether	36483-60-0
Heptabromodiphenyl ether	68928-80-3
Octabromodiphenyl ether	32536-52-0
Nonabromodiphenyl ether	63936-56-1
Decabromodiphenyl ether DecaBDE	1163-19-5
Decabromobiphenyl	13654-09-6
Hexabromobiphenyl	36355-01-8
1,2,3-tribromo-4-phenylbenzene	51202-79-0
2,2',5-TRIBROMOBIPHENYL	59080-34-1
Benzene, 1,1'-oxybis[tribromo-	31153-30-7
Benzene,1,3,5-tribromo-2-(2,4,6-tribromophenoxy)-	35854-94-5
2,2',4,4',5,5'-HEXABROMODIPHENYL ETHER	68631-49-2
1,2,4,5-Tetrabromo-3-(2,4-dibromophenoxy)benzene	116995-33-6
2,2',4,4',5,6'-HEXABROMODIPHENYL ETHER	207122-15-4
Benzene,1,2,4-tribromo-5-(2,4-dibromophenoxy)-	60348-60-9
Benzene, pentabromophenoxy-	189084-65-9
Benzene,2,4-dibromo-1-(2,4-dibromophenoxy)-	5436-43-1
Benzene,1,1'-oxybis[3,4-dibromo-	93703-48-1
Benzene, 1,1'-oxybis[3,5-dibromo-	103173-66-6
1,2,4,5-Tetrabromo-3-(2,4,6-tribromophenoxy)benzene	116995-32-5
Benzene, 1,2,3,5-tetrabromo-4-(2,4,6-tribromophenoxy)-	117948-63-7
Benzene, 1,2,3,5-tetrabromo-4-(2,4,5-tribromophenoxy)-	207122-16-5
Heptabromodiphenyl ether	446255-22-7
Other PBDEs compounds	-

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Appendix 3：聚氯乙稀 Polyvinyl chloride (PVC)

物質名稱 Material	CAS Numbers
Polyvinyl chloride (PVC)	9002-86-2
Other Polyvinyl chlorides	9002-85-1 、 81517-61-5
Vinyl chloride/vinyl acetate copolymer	9003-22-9
Polyvinyl chloride	93050-82-9

Appendix 4：臭氧層破壞物質 List of Ozone Depleting Substances

氟氯碳化物包含下列物質：List of Chlorofluorocarbons(CFC's)

No.	物質名稱 Material	CAS Numbers
1	Trichlorofluoromethane(CFC11)	75-69-4
2	Dichlorodifluoromethane(CFC12)	75-71-8
3	Chlorotrifluoromethane(CFC13)	75-72-9
4	Pentachlorofluoroethane(CFC111)	354-56-3
5	Tetrachlorodifluoroethane(CFC112)	76-12-0
6	Trichlorotrifluoroethane(CFC113)	354-58-5 76-13-1
7	Dichlorotetrafluoroethane(CFC114)	76-14-2
8	Monochloropentafluoroethane(CFC115)	76-15-3
9	Heptachlorofluoropropane(CFC211)	422-78-6 135401-87-5
10	Hexachlorodifluoropropane(CFC212)	3182-26-1
11	Pentachlorotrifluoropropane(CFC213)	2354-06-5 134237-31-3
12	Tetrachlorotetrafluoropropane(CFC214)	29255-31-0 2268-46-4
13	Trichloropentafluoropropane(CFC215)	1599-41-3 4259-43-2 76-17-5
14	Dichlorohexafluoropropane(CFC216)	661-97-2
15	Monochloroheptafluoropropane(CFC217)	422-86-6
16	Other CFC' s prohibited by Montreal Protocol	-

氟氯烴化物包含下列物質：List of Hydrochlorofluorocarbons(HCFC's)

No.	物質名稱	CAS No.
1	Dichlorofluoromethane(HCFC-21)	75-43-4
2	Chlorodifluoromethane(HCFC-22)	75-45-6
3	Chlorofluoromethane(HCFC-31)	593-70-4
4	Tetrachlorofluoroethane(HCFC-121)	134237-32-4

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	1,1,1,2-tetrachloro-2-fluoroethane(HCFC-121a)	354-11-0
	1,1,2,2-tetrachloro-1-fluoroethane	354-14-3
5	Trichlorotrifluoroethane(HCFC-122)	41834-16-6
	1,2,2-trichloro-1,1-difluoroethane	354-21-2
6	Dichlorotrifluoroethane(HCFC-123)	34077-87-7
	Dichloro-1,1,2-trifluoroethane	90454-18-5
	2,2-dichloro-1,1,1-trifluoroethane	306-83-2
	1,2-dichloro-1,1,2-trifluoroethane(HCFC-123a)	354-23-4
	1,1-dichloro-1,2,2-trifluoroethane(HCFC-123b)	812-04-4
	2,2-dichloro-1,1,2-trifluoroethane(HCFC-123b)	812-04-4
7	Chlorotetrafluoroethane(HCFC-124)	63938-10-3
	2-chloro-1,1,1,2-tetrafluoroethane	2837-89-0
	1-chloro-1,1,2,2-tetrafluoroethane(HCFC-124a)	354-25-6
8	Trichlorofluoroethane(HCFC-131)	27154-33-2
	1-Fluoro-1,2,2-trichloroethane	(134237-34-6)
	1,1,1-trichloro-2-fluoroethane(HCFC-131b)	359-28-4
		811-95-0
9	Dichlorodifluoroethane(HCFC132)	25915-78-0
	1,2-dichloro-1,1-difluoroethane(HCFC-132b)	1649-08-7
	1,1-dichloro-1,2-difluoroethane(HCFC-132c)	1842-05-3
	1,1-dichloro-2,2-difluoroethane	471-43-2
	1,2-dichloro-1,2-difluoroethane	431-06-1
10	Chlorotrifluoroethane(HCFC-133)	1330-45-6
	1-chloro-1,2,2-trifluoroethane	1330-45-6
	2-chloro-1,1,1-trifluoroethane(HCFC-133a)	75-88-7
11	Dichlorofluoroethane(HCFC-141)	430-57-9
	1,1-dichloro-1-fluoroethane(HCFC-141b)	1717-00-6
	1,2-dichloro-1-fluoroethane	
12	Chlorodifluoroethane(HCFC-142)	25497-29-4
	1-chloro-1,1-difluoroethane(HCFC-142b)	75-68-3
	1-chloro-1,2-difluoroethane(HCFC-142a)	25497-29-4
13	1-Chloro-1-fluoroethane(HCFC-151a)	1615-75-4
14	Hexachlorofluoropropane(HCFC-221)	134237-35-7
		29470-94-8
15	Pentachlorodifluoropropane(HCFC-222)	134237-36-8
	1,1,1,3,3-Pentachloro-2,2-difluoropropane(HCFC-222c)	422-49-1
16	Tetrachlorotrifluoropropane(HCFC-223)	134237-37-9
	1,1,3,3-Tetrachloro-1,2,2-trifluoropropane(HCFC-223ca)	422-52-6
17	Trichlorotetrafluoropropane(HCFC-224)	134237-38-0
	1,3,3-Trichloro-1,1,2,2-tetrafluoropropane(HCFC-224ca)	422-54-8
18	Dichloropentafluoropropane,(Ethyne,fluoro-) (HCFC-225)	127564-92-5
	2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC-225aa)	128903-21-9
	2,3-Dichloro-1,1,1,2,3-pentafluoropropane(HCFC-225ba)	422-48-0
	1,2-Dichloro-1,1,2,3,3-pentafluoropropane(HCFC-225bb)	422-44-6
	3,3-Dichloro-1,1,1,2,2-pentafluoropropane(HCFC-225ca)	422-56-0
	1,3-Dichloro-1,1,2,2,3-pentafluoropropane(HCFC-225cb)	507-55-1
	1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC-225cc)	13474-88-9

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	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
	Chloro-1,1,2,2,3,3-hexafluoropropane(HCFC-226cb)	422-55-9
	2-Chloro-1,1,1,3,3,3-hexafluoropropane(HCFC-226da)	431-87-8
20	Pentachlorofluoropropane(HCFC-231)	134190-48-0
		421-94-3
21	Tetrachlorodifluoropropane(HCFC-232)	134237-39-1
	1,1,3,3-Tetrachloro-2,2-difluoropropane(HCFC-232ca)	1112-14-7
22	Trichlorotrifluoropropane(HCFC-233)	134237-40-4
	1,1,1-Trichloro-3,3,3-trifluoropropane	7125-83-9
	1,1,3-Trichloro-1,2,2-trifluoropropane(HCFC-233cb)	421-99-8
23	Dichlorotetrafluoropropane(HCFC-234)	127564-83-4
24	Chloropentafluoropropane(HCFC-235)	134237-41-5
	1-Chloro-1,1,3,3,3-pentafluoropropane	460-92-4
	1-Chloro-1,2,2,3,3-pentafluoropropane(HCFC-235ca)	679-99-2
25	Tetrachlorofluoropropane(HCFC-241)	134190-49-1
26	Trichlorodifluoropropane(HCFC-242)	134237-42-6
		127564-90-3
27	Dichlorotrifluoropropane(HCFC-243)	134237-43-7
	1,1-dichloro-1,2,2-trifluoropropane	(116890-51-8)
	2,3-dichloro-1,1,1-trifluoropropane	7125-99-7
	3,3-Dichloro-1,1,1-trifluoropropane	338-75-0
		460-69-5
28	Chlorotetrafluoropropane(HCFC-244)	134190-50-4
	3-chloro-1,1,2,2,2-tetrafluoropropane	679-85-6
29	Trichlorofluoropropane(HCFC-251)	134190-51-5
	1,1,3-trichloro-1-fluoropropane	818-99-5
30	Dichlorodifluoropropane(HCFC-252)	134190-52-6
31	Chlorotrifluoropropane(HCFC-253)	134237-44-8
	3-chloro-1,1,1-trifluoropropane j4r Novia (HCFC-253fb)	460-35-5
32	Dichlorofluoropropane(HCFC-261)	134237-45-9
	1,1-dichloro-1-fluoropropane	(420-97-3)
		7799-56-6
33	Chlorodifluoropropane(HCFC-262)	134190-53-7
	2-chloro-1,3-difluoropropane	102738-79-4
	1-Chloro-2,2-difluoropropane(HCFC-262ca)	420-99-5
34	Chlorofluoropropane(HCFC-271b)	134190-54-8
	2-chloro-2-fluoropropane	420-44-0
35	Other HCFC's prohibited by Montreal Protocol.	-

海龍(Halons)包含下列物質: List of Halons

No.	物質名稱	CAS No.
1	Bromochlorodifluoromethane (Halon 1211)	353-59-3
2	Bromotrifluoromethane (Halon 1301)	75-63-8
3	Dibromotetrafluoroethane (Halon 2402)	124-73-2

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4	Dibromodifluoromethane (Halon 1202)	75-61-6
5	Other Halons prohibited by Montreal Protocol.	-

溴氟烴化物包含下列物質：List of Bromodifluoromethane and isomers(HBFC's)

No.	物質名稱	CAS No.
1	Bromodifluoromethane and its isomers	-
2	Dibromofluoromethane (HBFC-21)	1868-53-7
3	Bromodifluoromethane (HBFC-22)	1511-62-2
4	Bromofluoromethane (HBFC-31)	373-52-4
5	Tetrabromofluoroethane (HBFC-121)	306-80-9 353-93-5
6	Tribromodifluoroethane (HBFC-122)	353-97-9
7	Dibromotrifluoroethane (HBFC-123= Halon 2302)	354-04-1
8	Bromotetrafluoroethane (HBFC-124)	124-72-1 354-07-4
9	Tribromofluoroethane (HBFC-131)	172912-75-3
10	Dibromodifluoroethane (HBFC-132)	75-82-1
11	Bromotrifluoroethane (HBFC-133a)	421-06-7
12	Dibromofluoroethane (HBFC-141)	358-97-4
13	Bromodifluoroethane (HBFC-142)	359-07-9
14	Bromofluoroethane (HBFC-151)	762-49-2
15	Hexabromofluoropropane (HBFC-221)	-
16	Pentabromodifluoropropane (HBFC-222)	-
17	Tetrabromotrifluoropropane (HBFC-223)	-
18	Tribromotetrafluoropropane (HBFC-224)	666-48-8
19	Dibromopentafluoropropane (HBFC-225)	431-78-7
20	Bromoheptafluoropropane (HBFC-226)	2252-79-1
21	Pentabromofluoropropane (HBFC-231)	-
22	Tetrabromodifluoropropane (HBFC-232)	148875-98-3
23	Tribromotrifluoropropane (HBFC-233)	431-48-1
24	Dibromotetrafluoropropane (HBFC-234)	460-86-6
25	Bromopentafluoropropane (HBFC-235)	460-88-8
26	Tetrabromofluoropropane (HBFC-241)	-
27	Tribromodifluoropropane(HBFC-242)	70192-80-2 666-25-1
28	Dibromotrifluoropropane (HBFC-243)	70192-83-5 460-60-6
29	Bromotetrafluoropropane (HBFC-244)	679-84-5 460-67-3
30	Tribromofluoropropane (HBFC-251)	75372-14-4
31	Dibromodifluoropropane (HBFC-252)	460-25-3 51584-25-9
32	Bromotrifluoropropane (HBFC-253)	421-46-5 460-32-2
33	Dibromofluoropropane (HBFC-261)	51584-26-0 453-00-9

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34	Bromodifluoropropane (HBFC-262)	461-49-4
35	Bromofluoropropane (HBFC-271)	352-91-0 1871-72-3
36	Tetrabromodifluoropropane (HBFC-232 B4)	148875-98-3
37	Dibromotetrafluoropropane (HBFC-234 B2)	460-86-6
38	Tetrabromofluoropropane (HBFC-241 B4)	148875-95-0
39	Bromodifluoropropane (HBFC-262 B1)	111483-20-6
40	C2HFBBr4 一氟四溴乙烷	-
41	C2HF2Br3 三氟二溴乙烷	-
42	C2H2F2Br2 二氟二溴乙烷	-
43	C2H2FBr3 一氟三溴乙烷	-
44	C3HFBBr6 一氟六溴丙烷	-
45	C3HF2Br5 二氟五溴丙烷	-
46	C3HF3Br4 三氟四溴丙烷	-
47	C3HF4Br3 四氟三溴丙烷	-
48	C3HF5Br2 五氟二溴丙烷	-
49	C3H2FBBr5 一氟五溴丙烷	-
50	C3H2F2Br4 二氟四溴丙烷	-
51	C3H2F3Br3 三氟三溴丙烷	-
52	C3H2F4Br2 四氟二溴丙烷	-
53	C3H2F5Br 五氟一溴丙烷	-
54	C3H3FBBr4 一氟四溴丙烷	-
55	C3H3F2Br3 二氟三溴丙烷	-
56	C3H3F3Br2 三氟二溴丙烷	-
57	C3H3F4Br 四氟一溴丙烷	-
58	C3H4FBBr3 一氟三溴丙烷	-
59	C3H4F2Br2 二氟二溴丙烷	-
60	C3H4F3Br 三氟一溴丙烷	-
61	C3H5FBBr2 一氟二溴丙烷	-
62	C3H5FBr 一氟一溴丙烷	-
63	C3H6FBr 一氟一溴丙烷	-
64	CFC-112	28605-74-5
65	CFC-216	42560-98-5
66	Other HBFC's prohibited by Montreal Protocol.	-

氫氟烴類化合物包含下列物質：List of Hydrofluorocarbon(HFC) & Perfluorocarbons(PFC)

No.	物質名稱	CAS No.
1	Carbon tetrafluoride (CF4)	75-73-0
2	Perfluoroethane (C2F6)	76-16-4
3	Perfluoropropane (C3F8)	76-19-7
4	Perfluorobutane (C4F10)	355-25-9
5	Perfluoropentane (C5F12)	678-26-2
6	Perfluorohexane (C6F14)	355-42-0
7	Perfluorocyclobutane (c-C4F8)	115-25-3

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8	Perfluorodecalin (C10F18)	306-94-5
9	Trifluoromethyl sulfur pentafluoride	373-80-8
10	Trifluoromethane HFC-23 (CHF3)	75-46-7
11	Difluoromethane HFC-32 (CH2F2)	75-10-5
12	Methyl fluoride HFC-41 (CH3F)	593-53-3
13	2H,3H-Decafluoropentane HFC-43-10mee (C5H2F10)	138495-42-8
14	Pentafluoroethane HFC-125 (C2HF5)	354-33-6
15	Tetrafluoroethane HFC-134 (C2H2F4)	359-35-3
16	1,1,1,2-tetrafluoroethane HFC-134a (CH2FCF3)	811-97-2
17	1,1,2-trifluoroethane HFC-143 (CHF2CH2F)	430-66-0
18	1,1,1-Trifluoroethane HFC-143a (C2H3F3)	420-46-2
19	1,2-Difluoroethane HFC-152	624-72-6
20	1,1-difluoroethane HFC-152a (C2H4F2)	75-37-6
21	Fluoroethane HFC-161	353-36-6
22	1,1,1,2,3,3,3-Heptafluoropropane HFC-227ea (CF3CHFCF3)	431-89-0
23	1,1,1,2,2,3-Hexafluoropropane HFC-236cb (CH2FCF2CF3)	677-56-5
24	1,1,1,2,3,3-hexafluoropropane HFC-236ea (CHF2CHFCF3)	431-63-0
25	1,1,1,3,3,3-hexafluoropropane HFC-236fa (CF3CH2CF3)	690-39-1
26	1,1,2,2,3-pentafluoropropane HFC-245ca (CH2FCF2CHF2)	679-86-7
27	1,1,1,3,3-Pentafluoropropane HFC-245fa (CHF2CH2CF3)	460-73-1
28	1,1,1,3,3-Pentafluorobutane HFC-365mfc (CH3CF2CH2CF3)	406-58-6
29	Other HFC' s & PFC' s	-

其他臭氧層破壞物質包含下列物質: List of Other Ozone Depleting Substances

No.	物質名稱	CAS No.
1	溴化甲烷 (Methyl Bromide)	74-83-9
2	氯溴甲烷 (Chlorobromomethane)	74-97-5
3	四氯化碳 (Tetrachloromethane)	56-23-5

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4	1,1,1-三氯乙烷 (1,1,1-Trichloroethane)	71-55-6
5	溴乙烷 (Bromoethane)	74-96-4
6	溴丙烷 (1-Bromopropane)	106-94-5
7	氯甲烷 (Chloromethane)	74-87-3
8	三氟碘甲烷 (Trifluoroiodomethane)	2314-97-8
9	六氟化硫(SF6) Sulfur hexafluoride	2551-62-4
10	其他臭氧層破壞物質 Other Ozone Depleting Substances	-

Appendix 5 : Asbestos and its Compounds

Material	CAS Numbers
Asbestos	1332-21-4
Actinolite	77536-66-4
Amosite (Grunerite)	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6
Chrysotile asbestos	132207-32-0
Asbestos, crocidolite	132207-33-1

Appendix 6 : Brominated Flame Retardants (BFR) (other than PBBs, PBDEs, HBCDD, TBBPA)

Material	CAS Numbers
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-
Brominated flame retardant which comes under notation of ISO1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-

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Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-
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]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Tetra-decabromo-diphenoxy-benzene	58965-66-5
1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1
3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	Appendix 7
TBBA, unspecified	30496-13-0
2,2',6,6'-Tetrabromobisphenol A	79-94-7
TBBA-epichlorhydrin oligomer	40039-93-8
TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer	28906-13-0
TBBA carbonate oligomer, phenoxy end capped	94334-64-2
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-bisphenol A-phosgene polymer	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7
Brominated epoxy resin end-capped with tribromophenol	135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
TBBA-bis-(allyl-ether)	25327-89-3
TBBA-dimethyl-ether	37853-61-5
Tetrabromo-bisphenol S	39635-79-5
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
2,4-Dibromo-phenol	615-58-7
2,4,6-tribromo-phenol	118-79-6
Pentabromo-phenol	608-71-9
2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
Bis(methyl)tetrabromo-phthalate	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
TBPA, glycol-and propylene-oxide esters	75790-69-1

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N,N' -Ethylene - bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Dibromo-neopentyl-glycol	3296-90-0
Dibromo-propanol	96-13-9
Tribromo-neopentyl-alcohol	36483-57-5
Poly tribromo-styrene	57137-10-7
Tribromo-styrene	61368-34-1
Dibromo-styrene grafted PP	171091-06-8
Poly-dibromo-styrene	31780-26-4
Bromo-/Chloro-paraffins	68955-41-9
Bromo-/Chloro-alpha-olefin	82600-56-4
Vinylbromide	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
Tris(tribromo-neopentyl) phosphate	19186-97-1
Chlorinated and brominated phosphate ester	125997-20-8
Pentabromo-toluene	87-83-2
Pentabromo-benzyl bromide	38521-51-6
1,3-Butadiene homopolymer, brominated	68441-46-3
Pentabromo-benzyl-acrylate, monomer	59447-55-1
Pentabromo-benzyl-acrylate, polymer	59447-57-3
Decabromo-diphenyl-ethane	84852-53-9
Tribromo-bisphenyl-maleimide	59789-51-4
Tetrabromo-cyclo-octane	31454-48-5
1,2-Dibromo-4-(1,2-dibromo-methyl)-cyclo-hexane	3322-93-8
Tetrabromophthalic acid Na salt	25357-79-3
Tetrabromo phthalic anhydride	632-79-1
Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
trans-2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Bis(2, 3-dibromopropyl) phosphate	5412-25-9
Bis(2, 4, 6-tribromophenyl) carbonate	67990-32-3
Polystyrene, brominated	88497-56-7
3,4,5,6-Tetrabromo-1,2-benzenedicarboxylic mixed esters acid, propylene with diethylene glycol and glycol	77098-07-8
TBBPA, 2,2-bis[4-(2,3-epoxypropyloxy) dibromo Phenyl]propane polymer	68928-70-1
Decabromo-diphenyl-ethane	61262-53-1
Hexabromobenzene	87-82-1
Polytetrafluoroethylene	9002-84-0
Tribromomethane	75-25-2
Hexabromocyclododecane	25637-99-4
Other Brominated Flame Retardants	—

Chlorinated Flame Retardants (CFRs)

Material	CAS Numbers
2,2-Bis(chloromethyl)trimethylene bis[bis (2-chloroethyl) phosphate]	38051-10-4
Chlorendic acid	115-28-6
Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0

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Hexachlorocyclopentadienyl-dibromocyclooctane	51936-55-1
Tetrakis(2-chloroethyl)dichloroisopentylidiphosphate	38051-10-4
Other chlorinated compounds	-

Appendix 7、Perchlorates

Material	CAS Numbers
Lithium perchlorate	7791-03-9
Perchloric acid, zinc salt, hexahydrate	10025-64-6
zinc perchlorate	13637-61-1
Manganese(II) perchlorate hexahydrate	15364-94-0
ammonium perchlorate	7790-98-9
Chromic perchlorate	13537-21-8
Barium perchlorate	13465-95-7
Lead perchlorate	13637-76-8
Magnesium Perchlorate	10034-81-8
Perchloric acid, cobalt (2+) salt	13455-31-7
Perchloric acid, mercury(2+) salt	7616-83-3
Perchloric acid, nickel(2+) salt, hexahydrate	13520-61-1
Nickel perchlorate	13637-71-3
Potassium Perchlorate	7778-74-7
Sodium Perchlorate	7601-89-0
Thallium(3+) perchlorate	15596-83-5
Lithium Perchlorate	14797-73-0
Perchloric acid	7601-90-3
Other perchlorate compounds	-

Appendix 8、Radioactive substances

Material	CAS Numbers
Uranium-238	7440-61-1
Radon	10043-92-2
Americium-241	14596-10-2
Thorium-232	7440-29-1
Cesium-137	10045-97-3
Strontium-90	10098-97-2
Strontium	7440-29-6
Uranium	7440-61-6
Americium	7440-35-9
Cesium	7440-46-2
Strontium	7440-24-6
Plutonium	7440-07-5
Other radioactive substances	-

Appendix 9、Hexabromocyclododecane (HBCDD)

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Material	CAS Numbers
Cyclododecane,hexabromo-	25637-99-4
1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
α -hexabromocyclododecane	134237-50-6
β -hexabromocyclododecane	134237-51-7
γ -hexabromocyclododecane	134237-52-8
1,1,2,2-Tetrabromoethane	79-27-6
rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6
rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5
(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7
(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8
(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9
(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2
(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5
(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6
(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7

Appendix 10 : Halogenated Dioxins & Furans

Material	CAS Numbers
Polychlorinated Dibenzo-p-Dioxin	-
Polychlorinated Dibenzofuran	-
Co- PCBs	-
Polychlorinated dibenzofurans (PCDFs)	136677-10-6
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9
1,2,3,4,6,7,9-heptachlorodibenzo-p-dioxin	58200-70-7
1,2,3,4,6,7-hexachlorodibenzo-p-dioxin	58200-66-1
1,2,4,6,7,9/1,2,4,6,8,9-hexachlorodibenzo-p-dioxin (isomerpair)	39227-62-8 , 58802-09-8

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1, 2, 3, 8, 9-pentachlorodibenzo-p-dioxin	71925-18-3
1, 2, 4, 6, 8/1, 2, 4, 7, 9-pentachlorodibenzo-p-dioxin (isomerpair)	71998-76-0, 82291-37-0

Appendix 11、Chlorinated Hydrocarbons

Material	CAS Numbers
1,1,1,2 Tetrachloroethane	630-20-6
1,1,2,2 Tetrachloroethane	79-34-5
Tetrachloroethylene	127-18-4
Trichloromethane	67-66-3
1,1,2 Trichloroethane	79-00-5
Trichloroethylene	79-01-6
1,1 Dichloroethylene	75-35-4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
Pentachloroethane	76-01-7
Methylenechloride	75-09-2
Tetrachloromethane	56-23-5
1,1,1-Trichloroethane (TCA)	71-55-6
Bis (chloromethyl) ether	542-88-1
Pentachlorophenol	87-86-5
Vinyl Chloride (monomer)	75-01-4
1,2-Dichloroethylene	540-59-0

Appendix 12：Halogenated Diphenyl Methanes

Material	CAS Numbers
Monomethyl tetrachloro diphenyl methane Trade name: Ugilec 141	76253-60-6
Monomethyl dichloro diphenyl methane Trade name: Ugilec 121, Ugilec 21	81161-70-8
Monomethyl dibromo dipenyl methane Trade name: DBBT	99688-47-8
Monomethyldibromo Diphenyl Methane	99788-47-8

Appendix 13：Nonylphenol/ethoxylates (NP/NPEs) and related substances

Material	CAS Numbers
p-nonyl-phenol	104-40-5
4-nonyl-phenol, branched	84852-15-3
Nonylphenol, branched	90481-04-2
Isononylphenol	11066-49-2
p-Isononylphenol	26543-97-5
p-(Nonan-2-yl)phenol	17404-66-9
p-(2-Methyloctan-2-yl) phenol	30784-30-6
4-(3-Methyloctan-3-yl) phenol	52427-13-1
o-Nonylphenol	136-83-4

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o-Isononylphenol		27938-31-4
Phenol, 2-nonyl-, branched		91672-41-2
m-Nonylphenol		139-84-4
Neononylphenol		1196678-78-0
4-(3,5-Dimethylheptan-3-yl)		186825-36-5
4-(3,6-Dimethylheptan-3-yl)		142732-63-3
2-(Nonan-2-yl) phenol		17404-45-4
Phenol, 2-tert-nonyl-		89585-68-2
Phenol, sec-nonyl-		97372-03-7
Phenol, 4-tert-nonyl-		58865-77-3
Phenol, o-sec-nonyl-		27214-48-8
Phenol, p-sec-nonyl-		27072-91-9
4-Nonylphenol , branched and linear, ethoxylated	Ethanol, 2-[2-(4-nonylphenoxy)ethoxy]-	20427-84-3
	Poly(oxy-1,2-ethanediyl), α -(4-nonylphenyl)- ω -hydroxy-	26027-38-3
	Ethanol, [2-[2-[2-(4-nonylphenoxy) ethoxy] ethoxy] ethoxy]-	7311-27-5
	Poly(oxy-1,2-ethanediyl), α -(isononylphenyl)- ω -hydroxy-	37205-87-1
	POLYETHYLENE GLYCOL TRIMETHYLNONYL ETHER	127087-87-0
	3,6,9,12,15-Pentaoxaheptadecan-1-ol,17-(4-nonylphenoxy)-	34166-38-6
	3,6,9,12,15,18-Hexaoxaeicosan-1-ol,20-(4- nonylphenoxy)-	27942-27-4
	3,6,9,12,15,18,21,24-Octaoxahexacosan-1- ol,26-(4-nonylphenoxy)-	14409-72-4
	Ethanol,2-(4-nonylphenoxy)-	104-35-8
	polyethylene glycol isononylphenol ether	37205-87-1
	Ethanol,2-[2-(4-tert-nonylphenoxy)ethoxy]- (9CI)	156609-10-8
3,6,9,12,15,18,21-Heptaoxatricosan-1-ol, 23-(nonylphenoxy)-		27177-05-5
3,6,9,12,15,18,21,24,27-Nonaoxanonacosan-1-ol, 29- (nonylphenoxy)-		27177-08-8
Ethanol, 2-(nonylphenoxy)		27986-36-3
Ethanol, 2-[2-(nonylphenoxy)ethoxy]-		27176-93-8
Poly(oxy-1,2-ethanediyl), α -(2-nonylphenyl)- ω -hydroxy-		51938-25-1
3,6,9,12,15,18,21,24-Octaoxahexacosan-1-ol, 26-(nonylphenoxy)-		26571-11-9
2-[2-(4-nonylphenoxy)ethoxy]ethanol,Ethoxylated nonylphenol		68412-54-4
2-[4-(2-ethylhexyl)phenoxy]ethanol		68987-90-6
Formaldehyde, polymer with 4-nonylphenol and oxirane		30846-35-6

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Appendix 14、Perfluorinated compound (PFC)

Material	CAS Numbers
Perfluorooctane Sulfonates (PFOS)	
C ₈ F ₁₇ SO ₂ X, where X = OR, NR or other derivative	-
Perfluorooctane sulfonyl fluoride (PFOSF)	307-35-7
PFOS	1763-23-1
PFOS Ion	45298-90-6
PFOS Potassium Salt	2795-39-3
PFOS Lithium Salt	29457-72-5
PFOS Tetraethylammonium Salt	56773-42-3
PFOS Triphenylsulfonium Salt	144089-15-6
PFOS Sodium Salt	4021-47-0
PFOS Ammonium Salt	29081-56-9
PFOS Amide	754-91-6
PFOA	335-67-1
PFOA Ammonium Salt	
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
PFOA Sodium Salt	335-95-5
PFOA Potassium Salt	2395-00-8
PFOA Silver Salt	335-93-3
Perfluorooctanoyl fluoride	335-66-0
Methyl PFOA	376-27-2
Ethyl PFOA	3108-24-5
Perfluoroalkylsulfoamide	70225-14-8
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
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt	2991-51-7
2-Propenoic acid, 2-methyl-, 2- [ethyl[(heptadecafluorooctyl)sulfonyl]amino] ethyl ester	376-14-7
2-Propenoic acid, 2- [butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester	383-07-3
2-Propenoic acid, 2- [ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester	423-82-5
N-allylheptadecafluorooctanesulphonamide	423-86-9
1-Propanaminium, 3-[[heptadecafluorooctyl)sulfonyl]amino]- N,N,N-trimethyl-, iodide	1652-63-7
PERFLUOROOCTANOIC ANHYDRIDE	33496-48-9
perfluorodecanesulphonyl fluoride	307-51-7
perfluorohexanesulphonyl fluoride	423-50-7
N-ethylheptadecafluoro-N-(2- hydroxyethyl)octanesulphonamide	1691-99-2
N-ethylheptadecafluorooctanesulphonamide	4151-50-2

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2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl methacrylate	14650-24-9
ammonium nonadecafluorononanesulphonate	17202-41-4
heptadecafluoro-N-(2-hydroxyethyl)-N-methyloctanesulphonamide	24448-09-7
2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethylacrylate	25268-77-3
Poly(oxy-1,2-ethanediyl), alpha-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-omega-hydroxy-	29117-08-6
heptadecafluoro-N-methyloctanesulphonamide	31506-32-8
[3-[[heptadecafluorooctyl)sulphonyl]amino]propyl]trimethylamm onium chloride	38006-74-5
(2-hydroxyethyl)dimethyl[3-[(3-sulphopropyl)[(tridecafluorohexyl)sulphonyl]amino]propyl]amm onium hydroxide	38850-58-7
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt	55120-77-9
potassium decafluoro(pentafluoroethyl)cyclohexanesulphonate	67584-42-3
ammonium henicosafluorodecanesulphonate	67906-42-7
potassium nonafluorobis(trifluoromethyl)cyclohexanesulphonate	68156-01-4
2-Propenoic acid, 2-[butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, telomer with 2-[butyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, methyloxirane polymer with oxirane di-2-propenoate, methyloxirane polymer with oxirane mono-2-prop	68298-62-4
2-Propenoic acid, eicosyl ester, polymer with 2-[[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, hexadecyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-	68329-56-6
2-Propenoic acid, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-propenoate	68541-80-0
2-Propenoic acid, butyl ester, polymer with 2-[[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-	68555-90-8

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propenoate, 2- [methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2- propenoate, 2-[methyl[(tri	
2-Propenoic acid, 2-methyl-, 2- [ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2- methyl-2-propenoate, 2- [ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2- propenoate, 2-[ethyl	68555-91-9
2-Propenoic acid, 2-methyl-, 2- [[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2- [methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl- 2-propenoate, 2-[me	68555-92-0
2-Propenoic acid, 2- [[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, telomer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, alpha-(2-methyl-1-oxo-2-propenyl)-omega- hydroxypoly(oxy-1,2-ethanediyl), alpha-(2-methyl-1-oxo-2- prope	68586-14-1
1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluoro-N-(2-hydroxyethyl)-, reaction products with N- ethyl-1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-1-b utanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7- pentadecafluoro-N	68649-26-3
diaquatetrachloro[mu-[N-ethyl-N- [(heptadecafluorooctyl)sulphonyl]glycinato-O1:O1']]- mu- hydroxybis(2-methylpropanol)dichromium	68891-96-3
2-Propenoic acid, 2- [[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2- [methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2- propenoate, 2-[methyl[(tridecafluorohexyl)sulf	68867-60-7
2-Propenoic acid, 2-methyl-, 2- [ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester,telomer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-	68867-62-9

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methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl	-
2-Propenoic acid, eicosyl ester, polymers with branched octyl acrylate, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl acrylate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl acrylate	68909-15-9
Poly(oxy-1,2-ethanediyl), alpha-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-omega-methoxy-	68958-61-2
2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl	71487-20-2
sodium 3-[[3-(dimethylamino)propyl][(tridecafluorohexyl)sulphonyl]amino]-2-hydroxypropanesulphonate	73772-32-4
sodio(2-hydroxyethyl)[3-[(2-hydroxy-3-sulphonatopropyl][(tridecafluorohexyl)sulphonyl]amino]propyl] dimethylammonium hydroxide	81190-38-7
Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with epichlorohydrin, adipates (esters)	91081-99-1
sodium 3-[[3-(dimethylamino)propyl][(heptadecafluorooctyl)sulphonyl]amino]-2-hydroxypropanesulphonate	94133-90-1
Sulfonamides, C7-8-alkane, perfluoro, N-methyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl], polymers with 2-ethoxyethyl acrylate, glycidyl methacrylate and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride	98999-57-6
1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, lithium salt	117806-54-9
Sulfonamides, C4-8-alkane, perfluoro, N-methyl-N-(oxiranylmethyl)	129813-71-4
Fatty acids, C18-unsatd., trimers, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl esters	148240-80-6
Fatty acids, C18-unsatd., trimers, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl esters	148240-82-8

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1-Octanesulfonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-, reaction products with benzene- chlorine-sulfur chloride (S2Cl2) reaction products chlorides	182700-90-9
Sulfonamides, C4-8-alkane, perfluoro, N-(3-(dimethylamino)propyl), reaction products with acrylic acid	192662-29-6
Fattyacids, linseed-oil, dimers,2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters	306973-46-6
Propanoic acid,3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with2-ethyl-2-(hydroxymethyl)-1,3-propanediol andN,N',2-tris(6-isocyanatohexyl)imidodicarbonic diamide, reaction products withN-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydr	306975-56-4
Propanoicacid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with1,1'-methylenebis[4-isocyanatobenzene] and 1,2,3-propanetriol, reactionproducts withN-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-1-octanesulfonamideandN-ethy	306975-57-5
Sulfonamides,C4-8-alkane, perfluoro, N-(hydroxyethyl)-N- methyl, reaction products with12-hydroxyoctadecanoic acid and 2,4-TDI, ammonium salts	306973-47-7
Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 2-ethyl-1-hexanol and polymethylenepolyphenylene isocyanate	160901-25-7
Sulfonamides,C4-8-alkane, perfluoro,N-methyl-N-[(3-octadecyl-2-oxo-5-oxazolidinyl)methyl]	306974-19-6
Poly(oxy-1,2-ethanediyl),a-hydro-w-hydroxy-, polymer with1,6-diisocyanatohexane,N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides-blocked	306975-84-8
2-Propenoic acid, 2-methyl-,dodecyl ester, polymers with N-(hydroxymethyl)-2-propenamide,2-[methyl[(perfluoro-C4-8- alkyl)sulfonyl]amino]ethyl methacrylate, stearyl methacrylate and vinylidene chloride	306975-85-9
1-Hexadecanaminium,N,N-dimethyl-N-[2-[(2-methyl-1-o xo- propenyl)oxy]ethyl]-, bromide, polymers withBu acrylate, Bu methacrylate and2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate	306976-25-0

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2-Propenoic acid,2-methyl-, 2-methylpropyl ester, polymer with 2,4-diisocyanato-1-methylbenzene,2-ethyl-2-(hydroxymethyl)- 1,3-propanediol and 2-propenoic acid,N-ethyl-N-(hydroxyethyl)perfluoro-C4-8-alkanesulfonamides-blocked	306976-55-6
Siloxanesand Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2-propenyl)oxy]propylgroup]-terminated, polymers with2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and stearylmethacrylate	306974-28-7
Sulfonamides,C4-8-alkane, perfluoro,N,N'-[1,6-hexanediy]bis[(2-oxo-3,5-oxazolidinediyl)methylene]]bis[N-methyl-	306980-27-8
Sulfonic acids,C6-8-alkane, perfluoro, compds. with polyethylene-polypropylene glycolbis(2-aminopropyl) ether	306974-45-8
2-Propenoic acid,2-methyl-, 2-(dimethylamino)ethyl ester, telomer with2-[ethyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate and1-octanethiol, N-oxides	306977-10-6
Sulfonamides, C4-8-alkane, perfluoro, N-(3-(dimethyloxidoamino)propyl), potassium salts	179005-06-2
1-Decanamminium, N-decyl-N,N-dimethyl-, salt with ,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-1-octanesulfonic acid (1:1)	251099-16-8
2-Propenoic acid, butylester, polymers with acrylamide.2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and vinylidenechloride	306978-04-1
2-Propenoic acid,2-methyl-, 3-(trimethoxysilyl)propyl ester, polymers with acrylic acid,2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl acrylate and propyleneglycol monoacrylate, hydrolyzed, compds. with 2,2'-(methylimino)bis[ethanol]	306977-58-2
Hexane,1,6-diisocyanato-, homopolymer,N-(hydroxyethyl)-N-methylperfluoro-C4-8-alkanesulfonamides- and stearylalc.-blocked	306978-65-4
Poly(oxy-1,2-ethanediy),a-[2-(methylamino)ethyl]-w-[(1,1,3,3-tetramethylbutyl)phenoxy]-,N-[(perfluoro-C4-8-alkyl)sulfonyl] derivs	306979-40-8
N,N',N''-[phosphinylidynetris(oxyethane-2,1-diyl)]tris[N-ethylheptafluorooctane-1-sulphonamide]	2250-98-8
ammonium bis[2-[N-ethyl(heptafluorooctane)sulphonylamino]ethyl] phosphate	30381-98-7

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potassium 2,3,4,5-tetrachloro-6-[[[3- [[[(heptadecafluorooctyl)sulphonyl]oxy]phenyl]amino]carbon yl]b enzoate	57589-85-2
N-ethylheptadecafluoro-N-[3- (trimethoxysilyl)propyl]octanesulphonamide	61660-12-6
diammonium N-ethylheptadecafluoro-N-[2- (phosphonatooxy)ethyl]octanesulphonamidate	67969-69-1
Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 1,1'-methylenebis[4-isocyanatobenzene]	68608-14-0
2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 1,1- dichloroethene, 2- [[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2- propenoate, N-(hydroxymethyl)-2-propenamide, 2- [methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2- [methyl[(pen	70776-36-2
2-Propenoic acid, 2-methyl-, polymers with Bu methacrylate, lauryl methacrylate and 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethyl methacrylate	127133-66-8
Fatty acids, C18-unsatd., trimers, 2- [[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl esters	148240-78-2
Sulfonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N- methyl, reaction products with 1,6-diisocyanatohexane homopolymer and ethylene glycol	148684-79-1
Sulfonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), polymers with 1,1'-methylenebis[4-isocyanatobenzene] and polymethylenepolyphenylene isocyanate, 2-ethylhexyl esters, Me Et ketone oxime-blocked	178535-22-3
Fatty acids, C18-unsatd., dimers, 2-[methyl[(perfluoro-C4-8-alkyl)sulfonyl]amino]ethylesters	306974-63-0
Sodium perfluoro(octane-1-sulfonate)	4021-47-0
Tetraethylammonium perfluorooctane-1-sulfonate	56773-42-3
Piperidin-1-ium perfluorooctane-1-sulfonate	71463-74-6
Magnesium bis(perfluorooctane-1-sulfonate)	91036-71-4
Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+)	68141-02-6
Ethanaminium, N,N,N-triethyl-, salt with pentadecafluorooctanoic acid (1:1)	98241-25-9

Other(Perfluoroalkyl sulfonates)PFASs

Perfluorobutyric acid 全氟丁酸	375-22-4
Pentanoic acid, 2,2,3,3,4,4,5,5,5-nonafluoro-	2706-90-3

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全氟戊酸	
Perfluorohexanoic acid 全氟己酸	307-24-4
Perfluoro-n-heptanoic acid 全氟庚酸	375-85-9
Perfluoro-n-nonanoic acid 全氟壬酸	375-95-1
Perfluorodecanoic acid 全氟癸酸	335-76-2
Perfluoro-n-undecanoic acid 全氟十一烷酸	2058-94-8
Perfluorododecanoic acid 全氟十二烷酸	307-55-1
Pentacosfluorotridecanoic acid 全氟十三酸	72629-94-8
Perfluorobutanesulfonate (PFBS) 全氟丁烷磺酸	375-73-5
perfluoropentane-1-sulphonic acid 全氟戊烷磺酸	2706-91-4
Perfluorohexanesulfonate (PFHXS) 全氟己烷磺酸	335-46-4
Perfluoroheptanesulfonic acid 全氟庚烷磺酸	375-92-8
Nonadecafluoro-1-nonanesulfonic acid-PFNS 全氟壬烷磺酸	68259-12-1

Appendix 15 : Organic Tin compounds

Material	CAS Numbers
Tributyl tin bromide	1461-23-0
Tributyl tin oxide	56-35-9
Tributyl tin acetate	56-36-0
Tributyl tin laurate	3090-36-6
Tributyl tin fluoride	1983-10-4
Triphenyl tin	668-34-8
Triphenyl tin chloride	639-58-7
Triphenyl tin hydroxide	76-87-9
Triphenyl tin acetate	900-95-8
Triphenyltin-N, N-dimethyldithiocarbamate	1803-12-9
Triphenyltinfluoride	379-52-2
Triphenyltinacetate	900-95-8
Triphenyltinchloride	639-58-7
Triphenyltinhydroxide	76-87-9
triphenyl[(2,2,4,4-tetramethyl-oxopentyl)oxy]-	18380-71-7
Triphenylstannyl 2-isopropyl-2,3-dimethylbutanoate	18380-72-8
Triphenyltin fatty acid (C9-11) salt	47672-31-1
Stannane, [(1-oxoundecyl)oxy]triphenyl-	94850-90-5
Triphenyltinchloroacetate	7094-94-2
Tributyltinmethacrylate	2155-70-6
Bis(tributyltin)fumalate	6454-35-9

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Bis(tributyltin)2,3-dibromosuccinate	31732-71-5
Tributyltinacetate	56-36-0
Tributyltinlaurate	3090-36-6
Bis(tributyltin)phthalate	4782-29-0
Copolymer of alkyl(c=8) acrylate, methyl methacrylate and tributyltin methacrylate	67772-01-4
Tributyltinsulfamate	6517-25-5
Bis(tributyltin)maleate	14275-57-1
Tributyltinchloride	1461-22-9
Chloro(triisobutyl)stannane	7342-38-3
Tributyltin cyclopentane carbonate = mixture	85409-17-2
Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylatemix	26239-64-5
Tetra-n-butyltin	1461-25-2
Dibutyltin oxide	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6
Diocetyl Tin Oxide	870-08-6
Diocetyl tin dilaurate	3648-18-8
Dibutyltin bis(benzyl maleate); Benzyl (Z,Z)-8,8-dibutyl-3,6,10-trioxo-1-phenyl-2,7,9-trioxa-8-stannatrid eca-4,11-dien-13-oate;	7324-74-5
Diocetyl tin dichloride; Stannane, dichlorodiocetyl-,	3542-36-7
Di(n-octyl)tin bis(isooctylthioglycolate) ; Diisooctyl 2,2'-[(diocetylstannylene)bis(thio)]diacetate	26401-97-8
Tributyltin(TBT)	56573-85-4
Dibutyltin	1002-53-5
Diocetyl tin	15231-44-4
Diocetyl tin maleate	16091-18-2
Bis (tributyltin) fumalate	24291-45-0
Tributyl tin fluoride	7304-48-5
Bis(tributyltin)2,3-dibromosuccinate	56323-17-2
Bis(tributyltin)maleate	24291-45-0
Other tri-substituted organostannic compounds	-
Tributyltin	688-73-3
Tributyltin benzoate	4342-36-3
Tributyltin linoleate	24124-25-2
Other Dibutyltin compounds	-
Tetrabutyltin (TeBT)	1461-25-2
Tetraoctyltin (TeOT)	3590-84-9
Monooctyltin (MOT) Compounds	-
Tricyclohexyltin (TCyT) Compounds	-
Triphenyltin (TPhT) Compounds	-

Appendix 16 : Antimicrobial and/or Biocidal substances

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Material	CAS Numbers
Abamectin	71751-41-2
Acrolein	107-02-8
alphachloralose	15879-93-3
Aluminium phosphide releasing phosphine	20859-73-8
Aluminium phosphide releasing phosphine4	20859-73-8
Basic Copper carbonate	12069-69-1
Bendiocarb	22781-23-3
Bifenthrin	82657-04-3
Brodifacoum	56073-10-0
Bromadiolone	28772-56-7
Carbon dioxide	124-38-9
Chlorophacinone	3691-35-8
Clothianidin	210880-92-5
Copper (II) hydroxide	26427-59-2
Copper (II) oxide	1317-38-0
Coumatetralyl	5836-29-3
Creosote	8001-58-9
DDACarbonate	894406-76-9
Dazomet	533-74-4
DCOIT (4,5-Dichloro- 2-octyl-2H- isothiazol-3- one)	64359-81-5
DEET	134-62-3
Deltamethrin	52918-63-5
Dichlofluanid	1085-98-9
Difenacoum	56073-07-5
Difethialone	104653-34-1
Disodium octaborate tetrahydrate	12280-03-4
Disodium octaborate	12008-41-2
Disodium tetraborate	1330-43-4
Etofenprox	80844-07-1
Fenoxycarb	72490-01-8
Fenpropimorph	67564-91-4
Fipronil	120068-37-3
Flocoumafen	90035-08-8
Flufenoxuron	101463-69-8
Imidacloprid	138261-41-3
Indoxacarb	173584-44-6
IPBC	55406-53-6
K-HDO	66603-10-9
Lambda-cyhalothrin	91465-08-6
Magnesium phosphide releasing phosphine	12057-74-8
Margosa extract	84696-25-3
Methyl nonyl ketone	112-12-9
Metofluthrin	240494-70-6
Nitrogen	7727-37-9
Nonanoic acid	112-05-0

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Propiconazole	60207-90-1
Spinosad	168316-95-8
Sulfuryl fluoride	2699-79-8
Tebuconazole	107534-96-3
Thiabendazole	148-79-8
Thiacloprid	111988-49-9
Thiamethoxam	153719-23-4
Tolylfluanid	731-27-1
Warfarin	81-81-2
Warfarin sodium	129-06-6
(Z,E)-tetradeca-9,12-dienyl acetate	30507-70-1
Aldrin	309-00-2
Gamma-Chlordene	3734-48-3
Trans- Chlordene	5103-74-2
Cis- Chlordene	5103-71-9
Heptachlor	76-44-8
Oxychlordane	27304-13-8
Trans-Nonachlor	39765-80-5
Cis-Nonachlor	5103-73-1
DDT	50-29-3
Dieldrin	60-57-1
Mirex	2385-85-5
Pentachlorophenol (PCP)	87-86-5
Toxaphene	8001-35-2
Chlordecone	143-50-0
Endosulfan	115-29-7
Endosulfan I	959-98-8
Endosulfan-II	33213-65-9
1,4-Dichlorobenzene	106-46-7
Endrin	72-20-8
Orthoboric acid	11113-50-1
Disodium tetraborate, pentahydrate	12179-04-3
Disodium tetraborate, decahydrate	1303-96-4
Tetraboron disodium heptaoxide, hydrate	12267-73-1
Chlordane	57-74-9
1,3,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]dec-8-ene	57-74-9
rel-(1R,2S,3R,4S,6S,7S)-1,3,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]dec-8-ene	5103-71-9
rel-(1R,2S,3R,4R,6S,7S)-1,3,4,7,8,9,10,10-Octachlorotricyclo[5.2.1.0(2,6)]dec-8-ene	5103-74-2
1,8,9,10,11,11-Hexachloro-4-oxatetracyclo[6.2.1.0(2,7).0(3,5)]undec-9-ene	6058-23-7
rel-(1R,4S,7S,8S,9S)-2,3,4,5,6,9-Hexachlorotricyclo[5.2.1.0(4,8)]deca-2,5-diene	56534-03-3
4-Chlorophenyl) cyclopropylmethanone	6640-25-1

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Sodium Borate	1303-43-4
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Appendix 17 : Chlorinated benzene

Material	CAS Numbers
Chlorobenzene 氯苯(一氯苯, MCB)	108-90-7
Benzene, tetrachloro- 四氯苯(TeCB)	12408-10-5
Benzene, 1,2,3,4(or1,2,4,5)-tetrachloro- (9CI) 四氯苯(TeCB)	84713-12-2
1,2,3,5-tetrachlorobenzene	634-90-2
1,2,3,4-Tetrachlorobenzene	634-66-2
1,2,4,5-Tetrachlorobenzene	95-94-3
2,5,2',5'-Tetrachlorobiphenyl (TeCB)	35693-99-3
1,2,4-Trichlorobenzene 三氯苯(Trichlorobenzene)	120-82-1
Trichlorobenzene, 1, 2, 3- 三氯苯(Trichlorobenzene)	87-61-6
(Dichlorobenzene), 1,2-(ortho-DCB) 二氯苯	95-50-1
1,4-Dichlorobenzene 1, 4-二氯苯	106-46-7
1,3,5-Trichlorobenzene 1, 3, 5-三氯苯	108-70-3
"Tetrachlorobenzene (mixed isomers)四氯苯(混合異構體)	12408-10-5
1,2,3,4(Or 1,2,4,5)-tetrachlorobenzene 1,2,3,4 (或 1,2,4,5) -四氯苯"	84713-12-2
Pentachlorobenzene 五氯苯	608-93-5
Hexachlorobenzene 六氯苯	118-74-1
Benzyl chloride 氯甲苯	100-44-7

Appendix 18 : Chromium VI and its compounds

Material	CAS Numbers
Chromium (VI) oxide	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Chromium trioxide	1333-82-0
Lead(II) chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Sodium chromate	7775-11-3
Sodium dichromate	10588-01-9
Strontium chromate	7789-06-2
Potassium dichromate	7778-50-9

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Potassium chromate	7789-00-6
Zinc chromate	13530-65-9
Sodium bichromate	7789-12-0
Dichromium tris(chromate)	24613-89-6
Potassium hydroxyoctaoxidizincatedichromate	11103-86-9
Pentazinc chromate octahydroxide	49663-84-5
Chromium, ion (Cr6+)	18540-29-9
Chromic acetate	1066-30-4
Lithium chromate	14307-35-8
Potassium chlorochromate	16037-50-6
Ammonium chromate	7788-98-9
Copper chromate	13548-42-0
Magnesium chromate	13423-61-5
Lead chromate (orange color)	1344-38-3
Dichromium zinc tetraoxide	12018-19-8
Zinc dichromate	14018-95-2
Ammonium dichromate	7789-09-5
Calcium dichromate	14307-33-6
Copper chromite	12053-18-8
Other chromium VI compounds	-

Appendix 19 : Benzidine-Based Dyes

Material	CAS Numbers
1,3-Naphthalenedi-sulfonic acid, 7-hydroxy-8-[2-[4'-(2-(4-hydroxyphenyl)diazeryl)][1,1'-biphenyl]-4-yl]diazeryl]-	117-33-9
1,3,6-Naphthalenetri-sulfonic acid, 8-hydroxy-7-[2-[4'-(2-(2-hydroxy-1-naphthalenyl)diazeryl)][1,1'-biphenyl]-4-yl]diazeryl]-, lithium salt (1:3)	65150-87-0
2,7-Naphthalenedi-sulfonic acid, 5-amino-3-[2-[4'-(2-(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)diazeryl)][1,1'-biphenyl]-4-yl]diazeryl]-4-hydroxy-, sodium salt (1:2)	68214-82-4
2,7-Naphthalenedi-sulfonic acid, 4-amino-5-hydroxy-3-[2-[4'-(2-(2-hydroxy-4-[(2-methylphenyl)amino]phenyl)diazeryl)][1,1'-biphenyl]-4-yl]diazeryl]-6-(2-phenyldiazeryl)-	72379-45-4
[1,1'-Biphenyl]-4,4'-diamine	92-87-5
[1,1'-Biphenyl]-4,4'-diamine, dihydrochloride	531-85-1
1-Naphthalenesulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-	573-58-0

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diylbis(azo)]bis[4-amino-, disodium salt (C.I. Direct Red 28)	
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[(2,4-diaminophenyl) azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6- (phenylazo)-, disodium salt (C.I. Direct Black 38)	1937-37-7
1-Naphthalenesulfonic acid, 8,8'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[7-hydroxy-,disodium salt (C.I. Direct Red 44)	2302-97-8
2,7-Naphthalenedisulfonic acid, 5-amino-3-[[4'-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo][1,1'-biphenyl]-4-yl]azo]-4- hydroxy-, trisodium salt (C.I. Direct Blue 2)	2429-73-4
Benzoic acid, 5-[[4'-[(1-amino-4-sulfo-2-naphthalenyl) azo][1,1'- biphenyl]-4-yl]azo]-2-hydroxy-,disodium salt (C.I. Direct Orange 8)	2429-79-0
Benzoic acid, 5-[[4'-[[2,6-diamino-3-[[8-hydroxy-3,6-disulfo-7-[(4-sulfo-1-naphthalenyl)azo]-2- naphthalenyl]azo]-5-methylphenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, tetrasodium salt (C.I. Direct Brown 31)	2429-81-4
Benzoic acid, 5-[[4'-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl) azo][1,1'-biphenyl]-4-yl]azo]-2- hydroxy-, disodium salt (C.I. Direct Brown 2)	2429-82-5
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[(2,4-diamino-5-methylphenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6- (phenylazo)-, disodium salt (Direct Black 4)	2429-83-6
Benzoic acid, 5-[[4'-[(2-amino-8-hydroxy-6-sulfo-1-naphthalenyl)azo][1,1'-biphenyl]-4-yl]azo]-2- hydroxy-, disodium salt (C.I. Direct Red 1)	2429-84-7
Benzoic acid, 5-[[4'-[[2,6-diamino-3-methyl-5-[(4-sulfo-phenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-,disodium salt (C.I. Direct Brown 1:2)	2586-58-5
2,7-Naphthalenedisulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt (C.I. Direct Blue 6)	2602-46-2
Benzoic acid, 5-[[4'-[[2,4-dihydroxy-3-[(4-sulfo-phenyl) azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]- 2-hydroxy-, disodium salt (C.I. Direct Brown 6)	2893-80-3
1,3-Naphthalenedisulfonic acid, 8-[[4'-[(4-ethoxyphenyl) azo][1,1'- biphenyl]-4-yl]azo]-7-hydroxy-, disodium salt (C.I. Direct Red 37)	3530-19-6

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1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-[[4'-[[4-[(4-methylphenyl) sulfonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-, disodium salt (C.I. Acid Red 85)	3567-65-5
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-3-[[4'-[(4- hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-6-(phenylazo)-, disodium salt (C.I. Direct Green 1)	3626-28-6
Benzoic acid, 5-[[4'-[[2,4-diamino-5-[(4-sulfophenyl) azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy- disodium salt (C.I. Direct Brown 1)	3811-71-0
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-6-[[4'-[(4- hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-3-[(4- nitrophenyl)azo]-, disodium salt (C.I. Direct Green 6)	4335-09-5
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-3-[[4'-[(4- hydroxy-2-[(2-methylphenyl)amino]phenyl)azo][1,1'- biphenyl]-4-yl]azo]-6-[(4-sulfophenyl)azo]-, trisodium salt (C.I. Acid Black 94)	6358-80-1
Benzoic acid, 5-[[4'-[[4-[(4-amino-7-sulfo-1-naphthalenyl)azo]-6- sulfo-1-naphthalenyl]azo][1,1'-biphenyl]-4-yl] azo]-2-hydroxy-, trisodium salt (C.I. Direct Brown 27)	6360-29-8
Benzoic acid, 5-[[4'-[[2,6-diamino-3-methyl-5-[(4- sulfophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2- hydroxy-3-methyl-, disodium salt (C.I. Direct Brown 154)	6360-54-9
Benzoic acid, 3,3'-[(3,7-disulfo-1,5-naphthalenediyl)bis [azo(6-hydroxy-3,1-phenylene)azo[6(or7)-sulfo-4,1- naphthalenediyl]azo[1,1'-biphenyl]-4,4'-diylazo]]bis[6-hy droxy-,hexasodium salt (C.I. Direct Brown 74)	8014-91-3
Cuprate(2-), [5-[[4'-[[2,6-dihydroxy-3-[(2-hydroxy-5- sulfophenyl)azo]phenyl]azo][1,1'-biphenyl]- 4-yl]azo]-2-hydroxybenzoato(4-)-, disodium salt (C.I. Direct Brown 95)	16071-86-6
2,7 Naphthalenedisulfonic acid, 4 amino 5 hydroxy [[[(substituted phenylamino)] substituted phenylazo]diphenyl]azo -,phenylazo-,disodium salt	/
4-(Substituted naphthalenyl)azo diphenyl azo substituted carbopolycycle azobenzenesulfonic acid,sodium salt	/
4-(Substituted phenyl)azo biphenyl azosubstituted carbopolycyclo azobenzenesulfonic acid,sodium salt	/

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4-(Substituted phenyl)azo biphenyl azo substituted carbopolycycle azobenzenesulfonic acid,sodium salt	/
Phenylazoaminohydroxynapht halenyl azobiphenylazo substituted benzene sodium sulfonate	/

Appendix 20 : Azocolorants and azodyes which form certain aromatic amines

Material	CAS Numbers
Biphenyl-4-ylamine	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4,4'-methylenedianiline	101-77-9
3,3'-dichlorobenzidine	91-94-1
3,3'-dimethoxybenzidine	119-90-4
3,3'-dimethylbenzidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine	120-71-8
2,2'-dichloro-4,4'-methylenedianiline	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine	90-04-0
4-amino azobenzene	60-09-3
2,4-xylydine	95-68-1
2,6-xylydine	87-62-7
4,4'-Diiodobiphenyl	3001-15-8

Note : The European Community's ban applies to azocolorants and azodyes that by reductive cleavage of azo groups may release one of the above 22 aromatic amines.

Appendix 21 : Arsenic and its compounds

Material	CAS Numbers
Arsenic	7440-38-2
Gallium arsenide	1303-00-0
Calcium arsenate	7778-44-1
Calcium arsenite	27152-57-4
Arsenic pentaoxide	1303-28-2
Arsenic trioxide	1327-53-3

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Potassium arsenite	10124-50-2
Potassium arsenate	7784-41-0
Lead arsenate	3687-31-8
Triethyl Arsenate	15606-95-8
Arsenic acid disodium salt, heptahydrate	10048-95-0
Arsenic acid, copper salt	10103-61-4
Arsenic acid, diammonium salt	7784-44-3
Arsenic acid, magnesium salt	10103-50-1
Arsenic trichloride	7784-34-1
Arsenic trihydride	7784-42-1
Arsenious acid, copper (II) salt	10290-12-7
Arsenic acid	7778-39-4
Other arsenic compounds	-

Appendix 22 : Antimony and its compounds

Material	CAS Numbers
Antimony (metallic)	7440-36-0
Antimony pentoxide	1314-60-9
Antimony trichloride	10025-91-9
Sodium antimonate	15432-85-6
Antimony Trioxide (Sb ₂ O ₃)	1309-64-4
Other antimony compounds	-

Appendix 23 : Beryllium and its compounds

Material	CAS Numbers
Beryllium	7440-41-7
Beryllium-aluminium alloy	12770-50-2
Beryllium chloride	7787-47-5
Beryllium fluoride	7787-49-7
Beryllium hydroxide	13327-32-7
Beryllium oxide	1304-56-9
Beryllium phosphate	13598-15-7
Beryllium sulfate	13510-49-1
Beryllium sulfate tetrahydrate	7787-56-6
Beryl ore(Beryllium aluminosilicate)	1302-52-9
Beryllium carbonate	66104-24-3
Beryllium nitrate	13597-99-4
Beryllium copper	11108-64-8
Beryllium carbonate basic	1319-43-3
Beryllium nitrate trihydrate	7787-55-5
Beryllium nitrate tetrahydrate	13510-48-0
Zinc beryllium silicate	39413-47-3
Beryllium copper alloy	11133-98-5
Beryllium silicate	13598-00-0

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Other beryllium compounds	-
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Appendix 24 : Bismuth and its compounds

Material	CAS Numbers
Bismuth	7440-69-9
Bismuth trioxide	1304-76-3
Bismuth nitrate	10361-44-1
Bismuth titanium oxide	11115-71-2
Bismuth strontium calcium copper oxide	114901-61-0
Dibismuth trititanium nonaoxide	12010-68-3
Dibismuth trizirconium nonaoxide	12048-52-1
Bismuth germanate	12233-56-6
Dodecabismuth germanium icosaoxide	12233-73-7
Bismuth titanium oxide	12441-73-5
Bismuth molybdenum oxide	13565-96-3
Bismuth telluride	1304-82-1
Bismuth(III) sulfide	1345-07-9
Bismuth vanadium tetraoxide	14059-33-7
Bismuth subsalicylate	14882-18-9
Bismuth tris(8-quinolyl oxide)	16029-28-0
Tetrabismuth trizirconium dodecaoxide	37306-42-6
Bismuth potassium iodide	41944-01-8
Dibismuth zirconium pentaoxide	53125-66-9
Bismuth subcarbonate	5892-10-4
Bibrocathol	6915-57-7
Bismuth tribromide	7787-58-8
Bismuth oxychloride	7787-59-9
Bismuth chloride	7787-60-2
Bismuth trifluoride	7787-61-3
Bismuth pentafluoride	7787-62-4
Bismuth(III) iodide	7787-64-6
Bismuth subgallate	99-26-3
色酚 AS-BI	1237-75-8
Other bismuth compounds	-

Appendix 25 : DHTDMAC, DODMAC/DSDMAC, DTDMAC(Surfactants and its compounds)

Material	CAS Numbers
Dimethyl ditallow ammonium chloride,DTDMAC	68783-78-8
Diocylldimethylammonium chloride/ Distearyl dimethylammonium chloride,DODMAC/DSDMAC	107-64-2
Dihydrogenated tallow dimethylammonium chloride,DHTDMAC	61789-80-8

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Appendix 26 : Nickel and its Compounds

Material	CAS Numbers
Nickel	7440-02-0
Nickel acetate	373-02-4
Nickel carbonate	3333-67-3
Nickel carbonyl	13463-39-3
Nickel Hydroxide	12054-48-7
Nickel hydroxide	11113-74-9
Nickelocene	1271-28-9
Nickel oxide	1313-99-1
Nickel subsulfide	12035-72-2
Nickel sulfate	7786-81-4
Nickel chloride	7718-54-9
Dinickel trioxide	1314-06-3
Nickel sulfamate	13770-89-3
NICKEL SULPHIDE	11113-75-0
NICKEL DIOXIDE	12035-36-8
NICKEL SULPHIDE	12137-12-1
Cobalt titanate green spinel	68186-85-6
Nickel niobium titanium yellow rutile	68611-43-8
Nickel (II) chloride, hexahydrate	7791-20-0
Antimony nickel titanium oxide yellow	8007-18-9
Other nickel compounds	

Appendix 27 : Phthalates Compounds

Item	Material	CAS Numbers
1	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich ° Diisodecyl phthalate(DIDP)	68515-49-1 26761-40-0
2	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)	71888-89-6
3	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear (DPP)	84777-06-0
4	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8
5	Diethyl phthalate(DEP)	84-66-2
6	Di-iso-pentyl phthalate (DIPP)	605-50-5
7	Di-n-pentyl phthalate (DnPP)	131-18-0
8	Butyl benzyl phthalate(BBP)	85-68-7
9	Dibutyl phthalate(DBP)	84-74-2
10	Diethylhexyl phthalate(DEHP)	117-81-7
11	Diisobutyl phthalate(DIBP)	84-69-5

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12	Diisononyl phthalate(DINP)	68515-48-0 28553-12-0
13	N-pentyl-isopentylphthalate(nPiPP)	776297-69-9
14	Di-n-hexyl phthalate(DnHP)	84-75-3
15	Di-n-octyl phthalate(DNOP)	117-84-0
16	Dimethyl phthalate; Dimethyl-o-phthalate(DMP)	131-11-3
17	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters ; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 ; 68648-93-1
18	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)	68515-42-4
19	Di-n-pentyl phthalate (DPENP)	-
20	Di-sec-octyl phthalate (DOP)	-
21	Diheptyl phthalate (DHP)	3648-21-3
22	Tri-o-cresyl phosphate	78-30-8
23	Dicyclohexyl Phthalate ; Phthalicacid dicyclohexylester	84-61-7
24	Di-n-hexyl phthalate (DHEXP)	-
25	Dicyclohexyl phthalate (DCHP)	-
26	Di-n-propyl phthalate	131-16-8
27	Benzyl Chloride	100-44-7
28	Butyl cyclohexyl phthalate	84-64-0
29	Dibenzyl phthalate	523-31-9
30	Diundecyl phthalate (DuDP)	3648-20-2
31	Cyclohexyl isobutyl phthalate	5334-09-8
32	Benzyl 3-isobutyryloxy-1-isopropyl-2,2-dimethylpropyl phthalate	16883-83-3
33	Benzyl 2-ethylhexyl phthalate	27215-22-1
34	Bis(methylcyclohexyl) phthalate	27987-25-3
35	Benzyl octyl phthalate	68515-40-2
36	Diundecyl phthalate, branched and linear	85507-79-5
37	Diallyl phthalate	131-17-9
38	Diisooctyl phthalate	27554-26-3
39	Ditridecyl phthalate	119-06-2
40	(C9-C11) dialkyl phthalate	68515-43-5
41	Undecyl dodecyl phthalate	68515-47-9
42	Heptyl nonyl phthalate, branched and linear	111381-89-6
43	Branched and linear nonyl undecyl phthalate	111381-91-0
44	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
45	DNP	84-76-4 14103-61-8
46	DPhP	84-62-8

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47	DPHP	53306-54-0
48	nDnOP	119-07-3
49	DnDP	84-77-5
50	other phtharates	-

Appendix 28 、Selenium (Se) and its compounds

Material	CAS Numbers
Selenium	7782-49-2
Hydrogen selenide	7783-07-5
Sodium selenide	1313-85-5
Selenium dioxide	7446-08-4
Sodium selenate	10112-94-4
Dimethyl selenide	593-79-3
Selenium oxide	12640-89-0
disodium selenite	10102-18-8
Sodium selenite	10112-94-4
disodium selenite	13410-01-0
selenium sulfide; sulfur selenide	7446-34-6
Selenous acid (H ₂ SeO ₃)	7783-00-8
Seleninyl chloride; selenium oxychloride; selenium oxichloric	7791-23-3
Other selenium compounds	-

Appendix 29 、Ethylene based glycol ethers

Material	CAS Numbers
2-Methoxyethanol	109-86-4
Methoxyethanol	32718-54-0
Methoxyethanol acetate	110-49-6
2-Ethoxyethanol	110-80-5
Ethoxyethanol acetate	111-15-9
Diethylene glycol dimethyl ether/(Bis(2-methoxyethyl) ether)	111-96-6
Ethylene glycol dimethyl ether	110-71-4
Methoxyacetic acid	625-45-6
Ethoxyacetic acid	627-03-2
Ethylene glycol monomethyl ether and acetate	-

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乙二醇甲醚及醋酸脂	
Ethylene glycol monoethyl ether and acetate	
乙二醇乙醚及醋酸脂	-

Appendix 30、Styrenated diphenylamine

Material	CAS Numbers
Benzenamine, 4-octyl-N-(4-octylphenyl)-	101-67-7
Benzenamine, 4-octyl-N-phenyl-	4175-37-5
Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]-	10081-67-1
Benzenamine, 4-(1,1,3,3-tetramethylbutyl)-N-[4-(1,1,3,3-tetramethylbutyl)phenyl]	15721-78-5
Benzenamine, 4-nonyl-N-(4-nonylphenyl)-	24925-59-5
Benzenamine, ar-octyl-N-(octylphenyl)-	26603-23-6
Benzenamine, ar-nonyl-N-phenyl-	27177-41-9
Benzenamine, ar-nonyl-N-(nonylphenyl)-	36878-20-3
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1
Benzenamine, N-phenyl-, styrenated	68442-68-2
Benzenamine, 2-ethyl-N-(2-ethylphenyl)-, (tripropenyl) derivatives	68608-77-5
Benzenamine, N-phenyl-, (tripropenyl) derivatives	68608-79-7
Benzenamine, N-phenyl-, reaction products with isobutylene and 2,4,4-trimethylpentene	184378-08-3

Appendix 31、Polycyclic aromatic hydrocarbons (PAHs)

Item	Material	CAS Numbers
1	Acp(Acenaphthene) 萵	83-32-9
2	AcPy(Acenaphthylene) 萵烯	208-96-8
3	Ant(Anthracene) 蒽	120-12-7
4	BaA【Benzo[a]anthracene】苯并(a) 蒽	56-55-3
5	BbF【Benzo[b]fluoranthene】苯并(b) 芘	205-99-2
6	BkF【Benzo[k]fluoranthene】苯并(k) 芘	207-08-9
7	BghiP【Benzo[g,h,i]perylene】苯并(g h i)二苯并芘	191-24-2

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8	Bap【Benzo[a]pyrene】苯并(a)芘	50-32-8
9	CHR(Chrysene) 屈	218-01-9
10	DBA【Dibenzo[a,h]anthracene】二苯并(a, h)蒽	53-70-3
11	FL(Fluoranthene) 芴蒽	206-44-0
12	Flu(Fluorene) 芴	86-73-7
13	IND【Indeno[1,2,3 c,d]pyrene】茛苯(1,2,3 cd)芘	193-39-5
14	Nap (Naphthalene) 萘	91-20-3
15	PA(Phenanthrene) 菲	85-1-8
16	Pyr(Pyrene) 芘	129-00-0
17	(BeP) Benzo[e]pyrene 苯并(e)芘	192-97-2
18	Benzo[j]fluoranthene 苯并[j] 芴蒽	205-82-3
19	Benzo(r,s,t)pentaphene 苯并(r,s,t)戊芬	189-55-9
20	Dibenz(a,h)acridine 二苯并(a,h)杂蒽	226-36-8
21	Dibenz(a,j)acridine 二苯并(a,j) 吡啶	224-42- 0
22	Dibenzo(a,e)fluoranthene 二苯并(a,e)芴蒽	5385-75-1
23	Dibenzo(a,e)pyrene 二苯并(a,e)芘	192-65-4
24	Dibenzo(a,h)pyrene 二苯并(a,h)芘	189- 64- 0
25	Dibenzo(a,l)pyrene 二苯并(a,l)芘	191-30- 0
26	7H-Dibenzo(c,g)carbazole 7H二苯并(c,g)卟唑	194-59- 2
27	5-Methylchrysene 5甲基屈	3697-24- 3
28	Benzo[a]anthracene	1718-53-2
29	Chrysene	1719-03-5
30	Cadmium hydroxide	21041-95-2
31	Octamethylcyclotetrasil	556-67-2

Appendix 32、Phosphates

Material	CAS Numbers
Tributyl phosphate 磷酸三丁酯	126-73-8
TOCP tricresyl phosphate 磷酸三甲苯酯	1330-78-5
Tris(2-chloroethyl)phosphate 磷酸三(2- 氯 乙 基)酯 TCEP	115-96-8
Tris-(2-chloroisopropyl)phosphate 磷酸三(2- 氯 异 丙 基)酯 TCP	13674-84-5
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8

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tris(2,3-dichloropropyl) phosphate 磷酸三(2,3-二氯丙基)酯	78-43-3
tris-(2,3-Dibromopropyl)phosphate 磷酸三(2,3-二溴丙基)酯 TDBPP	126-72-7
Triphenyl phosphate 磷酸三苯酯	115-86-6
Tri-o-cresyl phosphate 磷酸三鄰甲酚酯	78-30-8
Trimethyl phosphate 磷酸三甲酯	512-56-1
Triphenyl phosphate 磷酸三苯酯	115-86-6
Diphenyl octyl phosphate 磷酸二苯辛酯	115-88-8
Octicizer 辛酸劑	1241-94-7
Phosphoric acid, P,P'-1,3-phenylene P,P,P',P'-tetraphenyl ester 间苯二酚双(磷酸二苯酯)	57583-54-7
Tributyl phosphate 磷酸三丁酯	126-73-8
Phosphoric acid, dodecyl diphenyl ester 磷酸十二烷基二苯酯	27460-02-2
Phosphoric acid, hexadecyl diphenyl ester 磷酸十六烷基二苯酯	56827-92-0
Diethyl ethylphosphonate 磷酸二乙酯	78-38-6
Diethylphosphinic Acid, Aluminum Salt 二乙基磷酸鋁	225789-38-8
Diphenyl cresyl phosphate 磷酸二苯甲酚酯	26444-49-5
Tris(isopropylphenyl)phosphates 三(異丙基苯基)磷酸酯	26967-76-0
Tris(3-isopropylphenyl) phosphate 磷酸三(3-異丙基苯基)酯	72668-27-0
Diethyl ((diethanolamino)methyl)phosphonate ((二乙醇氨基)甲基)磷酸二乙酯	2781-11-5
Phosphinic acid, P,P-diethyl-, zinc salt (2:1) 二乙基次磷酸鋅	284685-45-6
Isodecyl diphenyl phosphate 異癸基磷酸二苯酯	29761-21-5
1,3,5-Triazine-2,4,6-triamine, phosphate 1,3,5-三嗪-2,4,6-三胺磷酸鹽	41583-09-9
Tri-m-cresyl phosphate 磷酸三甲苯酯	563-04-2
Tris(p-t-butylphenyl) phosphate 磷酸三(對叔丁基苯基)酯	78-33-1
Diphosphoric acid, compd. with piperazine 焦磷酸哌嗪	66034-17-1
Tri-p-cresyl phosphate 磷酸三對甲酚酯	78-32-0
Triethyl phosphate 磷酸三乙酯	78-40-0
Trioctyl phosphate 磷酸三辛酯	78-42-2
Tri(2-butoxyethyl) phosphate 磷酸三(2-丁氧基乙基)酯	78-51-3

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Phenol,isopropylated phosphate(3:1)異丙基苯酚磷酸鹽 68937-41-7

Appendix 33 、 Polychlorinated naphthalenes and specific substitutes (PCNs)

Material	CAS Numbers
Trichloronaphthalene	321-65-9
Tetrachloronaphthalene	1335-88-2
Pentachloronaphthalene	1321-64-8
Octachloronaphthalene	2234-13-1
Polychlorinated Naphthalences(Cl>=3)	70776-03-3
Other Polychlorinated aphthalences(Cl>=3)	-
Hexachloronaphthalene	1335-87-1
Heptachloronaphthalene	32241-08-0
Naphthalene,2,6-dichloro-	2065-70-5
2-ChloroNaphthalene	91-58-7
1,5-Dichloronaphthalene	1825-30-5
1,4-Dichloronaphthalene	1825-31-6
1,2-Dichloronaphthalene	2050-69-3
1,6-Dichloronaphthalene	2050-72-8
1,7-Dichloronaphthalene	2050-73-9
1,8-Dichloronaphthalene	2050-74-0
2,3-Dichloronaphthalene	2050-75-1
1,3-Dichloronaphthalene	2198-75-6
2,7-Dichloronaphthalene	2198-77-8
Monochloronaphthalene	25586-43-0
Dichloronaphthalene	28699-88-9
1,2,4,5,7,8-Hexachloronaphthalene	103426-92-2
1,2,3,4,5,8-Hexachloronaphthalene	103426-93-3
1,2,3,5,7,8-Hexachloronaphthalene	103426-94-4
1,2,3,5,6,8-Hexachloronaphthalene	103426-95-5
1,2,3,4,6,7-Hexachloronaphthalene	103426-96-6
1,2,3,5,6,7-Hexachloronaphthalene	103426-97-7
1,2,3,6-Tetrachloronaphthalene	149864-78-8
1,2,6,7-Tetrachloronaphthalene	149864-79-9
1,2,5,8-Tetrachloronaphthalene	149864-80-2

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1,2,3,8-Tetrachloronaphthalene	149864-81-3
1,2,7,8-Tetrachloronaphthalene	149864-82-4
1,2,3,7,8-Pentachloronaphthalene	150205-21-3
1,3,6,8-Tetrachloronaphthalene	150224-15-0
1,2,3,6,7-Pentachloronaphthalene	150224-16-1
1,2,4,6,7-Pentachloronaphthalene	150224-17-2
1,2,3,5,6-Pentachloronaphthalene	150224-18-3
1,2,4,5,7-Pentachloronaphthalene	150224-19-4
1,2,4,5,6-Pentachloronaphthalene	150224-20-7
1,2,4,7,8-Pentachloronaphthalene	150224-21-8
1,2,4,6,8-Pentachloronaphthalene	150224-22-9
1,2,3,6,8-Pentachloronaphthalene	150224-23-0
1,2,3,5,8-Pentachloronaphthalene	150224-24-1
1,2,4,5,8-Pentachloronaphthalene	150224-25-2
1,2,3,6,7,8-Hexachloronaphthalene	17062-87-2
1,2,3,4-Tetrachloronaphthalene	20020-02-4
1,4,6-Trichloronaphthalene	2437-54-9
1,4,5-Trichloronaphthalene	2437-55-0
1,3,5,8-Tetrachloronaphthalene	31604-28-1
1,4,5,8-Tetrachloronaphthalene	3432-57-3
2,3,6,7-Tetrachloronaphthalene	34588-40-4
1,2,4-Trichloronaphthalene	50402-51-2
1,2,3-Trichloronaphthalene	50402-52-3
1,3,5-Trichloronaphthalene	51570-43-5
1,2,6-Trichloronaphthalene	51570-44-6
1,2,4,6-Tetrachloronaphthalene	51570-45-7
1,2,3,5-Tetrachloronaphthalene	53555-63-8
1,3,5,7-Tetrachloronaphthalene	53555-64-9
1,2,3,5,7-Pentachloronaphthalene	53555-65-0
1,2,5-Trichloronaphthalene	55720-33-7
1,2,7-Trichloronaphthalene	55720-34-8
1,2,8-Trichloronaphthalene	55720-35-9
1,3,6-Trichloronaphthalene	55720-36-0

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1,3,7-Trichloronaphthalene	55720-37-1
1,3,8-Trichloronaphthalene	55720-38-2
1,6,7-Trichloronaphthalene	55720-39-3
2,3,6-Trichloronaphthalene	55720-40-6
1,2,3,7-Tetrachloronaphthalene	55720-41-7
1,3,6,7-Tetrachloronaphthalene	55720-42-8
1,4,6,7-Tetrachloronaphthalene	55720-43-9
1,2,3,4,5,6,7-Heptachloronaphthalene	58863-14-2
1,2,3,4,5,6,8-Heptachloronaphthalene	58863-15-3
1,2,3,4,5,6-Hexachloronaphthalene	58877-88-6
1,2,4,5-Tetrachloronaphthalene	6733-54-6
1,2,4,8-Tetrachloronaphthalene	6529-87-9
1,2,4,7-Tetrachloronaphthalene	67922-21-8
1,2,5,6-Tetrachloronaphthalene	67922-22-9
1,2,5,6-Tetrachloronaphthalene	67922-22-9
1,2,5,7-Tetrachloronaphthalene	67922-23-0
1,2,6,8-Tetrachloronaphthalene	67922-24-1
1,2,3,4,5-Pentachloronaphthalene	67922-25-2
1,2,3,4,6-Pentachloronaphthalene	67922-26-3
1,2,3,4,5,7-Hexachloronaphthalene	67922-27-4
1,2,4,5,6,8-Hexachloronaphthalene	90948-28-0
Other Polychlorinated aphthalences(Cl<=2)	

Appendix 34、Chlorinated paraffins Long-chain(LCCP)

Material	CAS Numbers
Chlorinated Paraffins	63449-39-8
1,1,1,2-Tetrachloroundecane	63981-28-2
Chlorinated paraffin (Paraffin wax, chlorinated; Paraffin waxes and Hydrocarbon waxes, chlorinated; Chlorinated paraffin;Chlorinated wax; Chlorinated waxes; Chlorowax 40;Chlorowax 500c;)	8029-39-8
Long chain chlorinated paraffins (LCCP; generally C18-28)	85535-86-0
Alkanes, C10-22, chloro	104948-36-9
Chlorinated Paraffins (C23, 43% Chlorine)	108171-27-3

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Undecane, heptachloro-	219697-10-6
Undecane, nonachloro-	219697-11-7
Undecane, 1,2,10,11,?,?,?-octachloro-	221174-07-8
Undecane, decachloro-	276673-33-7
Undecane, 1,1,1,3,6,7,10,11-octachloro-	601523-20-0
Undecane, 1,1,1,3,9,11,11,11-octachloro-	601523-25-5
Alkanes, C12-21, Chloro	84082-38-2
Alkanes, C6-18, Chloro	68920-70-7
Chlorinated microcrystalline hydrocarbon waxes (petroleum)	68938-43-2
Alkanes, C10-32, Chloro	84776-06-7
Chloroalkanes(C=12-16)	866758-65-8
Alkanes, C10-26, Chloro	97659-46-6

Appendix 35、Cobalt (Co) and its compounds

Material	CAS Numbers
Cobalt dinitrate hexahydrate 六水合硝酸钴 (II)	10026-22-9
Cobalt brown 钴棕;硫酸钴	10124-43-3
Cobalt nitrate 硝酸钴	10141-05-6
Cobalt blue 钴蓝	1345-16-0
Cobalt bis(2-ethylhexanoate) 己酸, 2-乙基-,钴盐	136-52-7
Cobalt bis(2-ethylhexanoate) 己酸, 2-乙基-,钴盐	513-79-1
Cobalt chromite blue green spinel 钴铬蓝;钴铬蓝绿色尖晶石	68187-11-1
Cobalt (C6-C19) branched alkanoate 钴的 (C6 - C 19) 支链烷酸酯(或盐)	68409-81-4
Cobalt boron neodecanoate 钴的硼酸盐新癸酸盐;	68457-13-6
Cobalt (II) diacetate 醋酸钴	71-48-7
Cobalt 钴	7440-48-4
Other Cobalt compounds 其它钴化合物	-

Appendix 36、RoHS 豁免清單 RoHS Exemption list

豁免碼 Exemption Code	RoHS Exemption content 豁免內容
3(a)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps(CCFL and EEFL)

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	for special purposes not exceeding (per lamp): Short length (≤ 500 mm) , $<3,5$ mg.
3(b)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps(CCFL and EEFL) for special purposes not exceeding (per lamp):Medium length (> 500 mm and $\leq 1\ 500$ mm) , < 5 mg.
3(c)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps(CCFL and EEFL) for special purposes not exceeding(per lamp):Long length (> 1500 mm) , <13 mg.
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight.
6(b)-I	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling.
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight.
6(c)	Copper alloy containing up to 4% lead by weight.
7(a)	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 %by weight or more lead).
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound.
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher.
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors.
8(b)	Cadmium and its compounds in electrical contacts.
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution.
13(a)	Lead in white glasses used for optical applications.
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards.
13(b)-I	Lead in ion coloured optical filter glass types.
13(b)-II	Cadmium in striking optical filter glass types.
13(b)-III	Cadmium and lead in glazes used for reflectance standards.
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages.
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses.
21(a)	Cadmium when used in colour printed glass to provide filtering functions, used as a component in lighting applications installed in displays and control panels of EEE.
21(b)	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses/
21(c)	Lead in printing inks for the application of enamels on other than borosilicate glasses.
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.

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Title: Environmental Restricted Substance Control Standard
環境限用物質管制標準

Established Dept: 品保單位 QA

Doc. No: SQS1-0001

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29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (1).
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes.
34	Lead in cermet-based trimmer potentiometer elements.
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body.

Appendix 37、推薦測試方法 Recommend test method

檢測項目 Substance	儀器設備 Test equipment	檢測方法/說明 Test method
鎘及其化合物 (Cd) (Cadmium and its compounds)	ICP-OES/ICP-AES/ICP-MS/ AAS	IEC 62321-5:2013
鉛及其化合物 (Pb) (Lead and its compounds)	ICP-OES/ICP-AES/ICP-MS/ AAS	IEC 62321-5:2013
汞及其化合物 (Hg) (Mercury and its compounds)	C-IC/ CV-AFS	IEC 62321-4:2013+AMD 1:2017
六價鉻化合物 (Cr ⁺⁶) (Hexavalent Chromium Compounds)	GC-MS-Py/TD-GC-MS	IEC 62321-7-1:2015 for Metal IEC 62321-7-2:2017 for polymer, electric
有機錫化合物 (Organic Tin Compounds) (Tributyltin & Triphenyltin Compounds)	GC-FPD	EN ISO 17353:2004 EN 71-3:2013
多溴聯苯/多溴聯苯醚 (PBBS/PBDEs)	GC-MS/LC-MS	IEC 62321-6:2013
砷 (Arsenic)	ICP-MS	EPA 3050B:1996 USEPA 3052, ICP-AES
甲醛 (Formaldehyde)		ASTM E 1333-96 ASTM D5116-97 ASTM D6007
聚氯乙烯及其混合物 (PVC) (Polyvinyl chloride and PVC blends)	FTIR-ATR	Beilstein's test < flame test >
DEHP/BBP/DBP/DIBP	GC MS	IEC 62321-8:2017
全氟辛烷磺酸(PFOS/A) (Perfluorooctane sulfonates/acid)	LC-MS	CEN / TS 15968 : 2010
鹵素(Halogen)- Br	IC	EN 14582:2016/ IEC 62321-3-2
鹵素(Halogen)- Cl	IC	EN 14582:2016
鄰苯二甲酸酯 (Phthalate)	GC/MS	EN 14372:2004 CPSC-CH-C1001-09.4 IEC 62321-8:2017

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