

亞洲光學『綠色採購』化學物質管理基準

Asia Optical 『green procurement』 of chemical substances management benchmark

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1. 產品

Products

1.1 環境管理物質名稱一覽表

Environment-related Substances to be Controlled ('Controlled Substances')

物質名稱 Substances	
重金屬 Heavy metals	1. 鎘以及鎘化合物(Cadmium (Cd) and cadmium compounds)
	2. 鉛以及鉛化合物(Lead (Pb) and lead compounds)
	3. 汞以及汞化合物(Mercury (Hg) and mercury compounds)
	4. 六價鉻化合物(Hexavalent chromium (Cr+6) compounds)
	5. 鎳及其鎳化合物(Nickel (Ni) and nickel compounds)
	6. 砷及其砷化合物(Arsenic(As) and Arsenic compounds)
有機氯化物 Chlorinated organic compounds	7. 多氯聯苯(PCB) (Polychlorinated biphenyls)
	8. 多氯化萘(PCN) (Polychlorinated naphthalenes)
	9. 多氯三聯苯(PCT) (Polychlorinated terphenyls)
	10. 短鏈氯化石蠟類 (Shortchain chlorinated paraffins (C10 –13) (SCCPs))
	11. 聚氯乙烯(PVC)以及聚氯乙烯混合物 (PVC &Polyvinyl chloride and PVC blends)
有機溴化合物 Brominated organic compounds	12. 多溴聯苯(PBB) (Polybrominated biphenyls)
	13. 多溴聯苯醚(PBDE) (Polybrominated diphenylethers)
有機錫化合物 Tin organic compounds	14. 三丁基錫(TBT)化合物及三苯基錫(TPT)化合物 (Tributyl tin compounds, Triphenyl tin compounds)
15. 三丁基氧化錫 (TBTO) (Tributyl tin oxide (TBTO))	
16. 二丁基錫化合物 (DBT) (Dibutyltin (DBT)compounds) (金屬換算) ※	
17. 二辛基錫化合物 (DOT) (Diocetyl tin (DOT)compounds) (金屬換算) ※	
18. 石棉 (Asbestos)	
19. 特定偶氮化合物 (Specific Azo compounds)	
20. 鄰苯二甲酸鹽 (Phthalates Bis(2-ethylhexyl)phthalate)	
21. 甲醛 (Formaldehyde)	
22. 臭氧層破壞物質 (Ozone depleting substances)	
23. 放射性物質 (Radioactive substances)	
24. 全氟辛酸磺酸(PFOS) 及其鹽類和 PFOS 相關化合物 Perfluorohexanesulphonic acid (PFOS), its salts and PFOS-related substances 全氟辛酸(PFOA)及其鹽類與酯類 (Perfluorooctyl acid and individual salts and esters of PFOA) 全氟和多氟烷基物質(PFAS) 包含長鏈烷基氟羧酸鹽類(LCPFAC) (Per- and polyfluoroalkyl substances (PFAS) including long-chain alkyl fluorocarboxylates (LCPFACs)) 全氟己烷磺酸 (PFHxS) 及其鹽類以及PFHxS相關物質Perfluorohexanesulphonic acid (PFHxS)	
25. 鹵素(溴和氯) (Halogen free(Bromine and Chlorine))	
26. 多環芳香族碳氫化合物(PAH) (Polycyclic-aromatic hydrocarbons (PAH))	
27. 苯乙烯和2,4,4-三甲基戊烯的反應物 (BNST) (Benzenamine,N-phenyl-,reaction products with strene and 2,4,4-trimethylpentene (BNST))	
28. 六溴環十二烷 (HBCDD或HBCD)及其所有主要非對應異構體 (Hexabromocyclo dodecane (HBCDD or HBCD) and all major diastereoisomers)	
29. 氧化鈹 (Beryllium oxide) 鈹及其化合物 (Beryllium (Be) and its compounds)	
30. 2-(2'-羥基-3',5'-二-叔-戊基苯基)苯並三唑(UV-328) (2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328))	
31. 得克隆 Dechlorane Plus	
歐盟制定新化學品政策法規(REACH) 高度關注物質(SVHC) & 附錄 17 Registration, Evaluation, Authorisation and Restriction of Chemical substances & Annex XVII	
衝突礦物 Conflict minerals 來自爭端地區的金 (gold) 、錫 (tin) 、鉭 (tantalum) 、鎢 (tungsten) 、鈷 (cobalt) 、雲母(Mica)	
其他 Others 紅磷及其磷系化合物 Red phosphorous and phosphorous compounds	
削減物質 Reduction of substance	
加利福尼亞州第65提案(加州65法案) California Proposition 65 (California Act 65)	
斯德哥爾摩公約公告之管制物質:持久性有機污染物(Persistent Organic Pollutants · 簡稱POPs) Stockholm Convention on Persistent Organic Pollutants(POPs)	
中國揮發性有機化合物法規國家標準 China National Standrds on VOC regulation	
美國有毒物質控制法 U.S. Toxic Substance Control Act · (TSCA)	

1.2 產品禁止含有化學物質

Prohibited Chemical Substances in Products

構成亞光產品的採購物品中禁止含有以下1.2.1~1.2.3所示的化學物質。這些化學物質的含有限度必須低於最大最大濃度值。此外,同一樣中記入多個最大最大濃度值時,則必須滿足全部條件。

Sections 1.2.1~1.2.3 list the chemical substances that are prohibited to be contained in products procured as a component of Asia products. The concentration of these chemical substances in Asia products must be less than or equal to the threshold. If multiple thresholds are written in a single threshold field, all of them must be satisfied.

1.2.1 產品禁止含有化學物質

Prohibited Chemical Substances in Products

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																																																
1	鎘和鎘化合物 Cadmium/cadmium compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation(EC) No 1907/2006 • 2011/65/EU指令 Directive 2011/65/EU • 中國MII法 China MII Methods • 韓國RoHS Korea RoHS • 日本J-MOSS Japan J-MOSS	全部 All 電池相關參照(1.2.2) except batteries(1.2.2) 包材相關參照(2) except packaging(2)	均質材料中鎘的 cadmium in homogeneous materials 0.01wt% (100ppm)	顏料、抗腐蝕表面處理、電氣及電子材料、光學玻璃、穩定劑、電鍍、樹脂顏料、螢光燈、電極、焊錫、電觸點、觸點、鍍鋅、PVC穩定劑 Pigment, anti-corrosion surface treatment, optical glass, stabilizer, plating, luorescent, electrode, solder, electric ontact, contact point, zinc plating																																																
		相關化學物質的代表性實例 Representative examples of relevant substance																																																			
		<table><tr><th>鎘/鎘化合物 Cadmium/cadmium compounds</th><th>CAS No.</th></tr><tr><td>鎘 Cadmium</td><td>7440-43-9</td></tr><tr><td>氧化鎘 Cadmium oxide</td><td>1306-19-0</td></tr><tr><td>硫化鎘 Cadmium sulfide</td><td>1306-23-6</td></tr><tr><td>氯化鎘 Cadmium chloride</td><td>10108-64-2</td></tr><tr><td>硫酸鎘 Cadmium sulfate</td><td>10124-36-4</td></tr><tr><td>其他鎘化合物 Other cadmium compounds</td><td>—</td></tr></table>				鎘/鎘化合物 Cadmium/cadmium compounds	CAS No.	鎘 Cadmium	7440-43-9	氧化鎘 Cadmium oxide	1306-19-0	硫化鎘 Cadmium sulfide	1306-23-6	氯化鎘 Cadmium chloride	10108-64-2	硫酸鎘 Cadmium sulfate	10124-36-4	其他鎘化合物 Other cadmium compounds	—																																		
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2	鉛和鉛化合物 Lead/lead compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006 • 2011/65/EU指令 Directive 2011/65/EU • 中國MII法 China MII Methods • 韓國RoHS Korea RoHS • 日本J-MOSS Japan J-MOSS • 美國OEHH A 加州65號提案 Proposition 65	全部 All 包材相關參照(2) except packaging(2)	均質材料中鉛含量依2011/65/EU指令 lead in homogeneous In accordance with Directive 2011/65/EU materials 0.1wt% (1,000ppm) 其它鉛含量限值需參照相關法令執行 Other lead content limits are implemented in accordance with relevant laws and regulations.	橡膠固化劑、顏料、塗料、潤滑劑、塑料穩定劑、易切削合金、易切削鋼、光學材料、CRT玻璃的X射線屏蔽、電焊材料、機焊材料、固化劑、硫化劑、鐵電材料、電鍍、合金、樹脂添加劑 Rubber hardener, pigment, paint, lubricant, plastic stabilizer, freemachining alloy, freecutting steels, optical materials, X-ray shielding in CRT glass, solder materials, curing agent, vulcanizing agent, ferroelectrics, plating, metal alloy																																																
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No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use					
3	汞及汞化合物 Mercury/mercury compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006 • 2011/65/EU指令 Directive 2011/65/EU • 中國MII法 China MII Methods • 韓國RoHS Korea RoHS • 日本J-MOSS Japan J-MOSS	全部 All 電池相關參照(1.2.2) except batteries(1.2.2) 包材相關參照(2) except packaging(2)	有意添加(E8109-02) Intentionally 均質材料中汞含量 mercury in homogeneous material 0.1wt% (1,000ppm)	螢光燈、電觸點材料、顏料、抗腐蝕劑、各類開關、高效發光體、抗菌處理 Fluorescent bulb, contact point material, pigment, anti-erosion, switches, antibacteria					
						相關化學物質的代表性實例 Representative examples of relevant substance				
						汞/汞化合物 Mercury/mercurycoumpoundsCAS No.				
						汞 Mercury7439-97-6				
						氯化汞（II+）Mercuric chloride33631-63-9				
						氯化汞(II) Mercury (II) chloride7487-94-7				
						硫酸汞 Mercuric sulfate7783-35-9				
						硝酸汞（2+）Mercuric nitrate10045-94-0				
						氧化汞(II) Mercuric (II) oxide21908-53-2				
						硫化汞（2+）Mercuric sulfide1344-48-5				
其他汞化合物 Other mercury compounds—										
4	六價鉻化合物 Chromium VI compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006 • 2011/65/EU指令 Directive 2011/65/EU • 中國MII法 China MII Methods • 韓國RoHS Korea RoHS • 日本J-MOSS Japan J-MOSS • REACH規則	全部 All 包材相關參照(2) except packaging(2) 直接接觸皮膚的皮革製品及皮革配件Direct contact with skin leather products and leather accessories	均質材料中六價鉻的chromium (VI) in homogeneous materials 0.1wt% (1,000ppm) 皮革總干重的0.0003wt%(3ppm) 0.0003wt% of the total dry weight of the leather (3ppm)	顏料、塗料、油墨、催化劑、電鍍、抗腐蝕表面處理、染料、皮革製品鞣劑 Pigment, paint, ink, catalyst, plating, anticorrosion surface treatment, dye,Leather tanning agent					
						相關化學物質的代表性實例 Representative examples of relevant substance				
						六價鉻化合物 Chromium VI compoundsCAS No.				
						氧化鉻(VI) Chromium (VI) oxide1333-82-0				
						鉻酸鋇 Barium chromate10294-40-3				
						鉻酸鈣 Calcium chromate13765-19-0				
						鉻酸鉛（II）Lead (II) chromate7758-97-6				
						鉬鉻紅(C.I.顏料紅104) Lead chromate molybdate sulphate red12656-85-8				
						C.I.顏料黃34 Lead sulfochromate yellow1344-37-2				
						鉻酸鈉 Sodium chromate2146108				
重鉻酸鈉 Sodium dichromate10588-01-9										
鉻酸銣 Strontium chromate2151068										
重鉻酸鉀 Potassium dichromate7778-50-9										
鉻酸鉀 Potassium chromate7789-00-6										
鉻酸鋅 Zinc chromate13530-65-9										
氫氧化鉻酸鋅 Pentazinc chromate octahydroxide49663-84-5										
氫氧化鉻酸鋅鉀 Potassium hydroxyoctaoxodizincatedichromate11103-86-9										
其他六價鉻化合物 Other chromium VI compounds—										
5	鎳及其化合物 Nickel and Nickel compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	產品外露部位之最外層表面處理 Surface coatings (plating) for the external exposed surface of produc	0.5 ug/cm ² /week	產品外露部位之最外層表面處理，使用含有金屬鎳或鎳合金物質作為電鍍、塗層等用途 Surface coatings (plating) for the external exposed surface of product,electrode plating /coating used with substances that contain metal nickel or nickel alloys					
						相關化學物質的代表性實例 Representative examples of relevant substance				
						鎳及其鎳化合物 Nickel and Nickel compoundsCAS No.				
						鎳 Nickel7440-02-0				
6	砷及其砷化合物 Arsenic(As) and Arsenic compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	均質材料的homogeneous material 0.01wt% (100ppm)	半導體材料 semiconductor materials					
						相關化學物質的代表性實例 Representative examples of relevant substance				
						砷及其砷化合物 Arsenic(As) and Arsenic compoundsCAS No.				
						砷 Arsenic(As)7440-38-2				

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use							
7	多氯聯苯類 (PCB類) 及指定替代品 Polychlorinated biphenyls(PCBs) and specific substitutes	・與化學物質審查及生產等規制相關的法律（化審法） Japan Law concerning the evaluation of chemical substances ・REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	有意添加(E8109-02) Intentionally	絕緣油、潤滑油、電絕緣材料、溶劑、電解液、塑化劑、防火材料、阻燃劑、介電密封劑 Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution, plasticizers, flame etardants, dielectric sealants							
					相關化學物質的代表性實例 Representative examples of relevant substance							
					<table><tr><th>多氯聯苯類（PCB類） Polychlorinated Biphenyls (PCBs)</th><th>CAS No.</th></tr><tr><td>多氯聯苯（所有異構體和同系物） Polychlorinated Biphenyls (all isomers and congeners)</td><td>1336-36-3</td></tr><tr><td>單甲基四氯二苯基甲烷(Ugilec141) Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)</td><td>76253-60-6</td></tr><tr><td>單甲基二氯二苯基甲烷(Ugilec121,Ugilec21) Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)</td><td>81161-70-8</td></tr><tr><td>單甲基二溴二苯基甲烷(DBBT) Monomethyl-dibromo-diphenyl methane (DBBT)</td><td>99688-47-8</td></tr></table>	多氯聯苯類（PCB類） Polychlorinated Biphenyls (PCBs)	CAS No.	多氯聯苯（所有異構體和同系物） Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3	單甲基四氯二苯基甲烷(Ugilec141) Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6	單甲基二氯二苯基甲烷(Ugilec121,Ugilec21) Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)
多氯聯苯類（PCB類） Polychlorinated Biphenyls (PCBs)	CAS No.											
多氯聯苯（所有異構體和同系物） Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3											
單甲基四氯二苯基甲烷(Ugilec141) Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6											
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單甲基二溴二苯基甲烷(DBBT) Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8											
8	多氯化萘 (至少含有3個氯原子)(PCN類) Polychlorinated naphthalenes (more than 3 chlorine atoms)	・與化學物質審查及生產等規制相關的法律（化審法） Japan Law concerning the evaluation of chemical substances ・EU新POPs規則（EC）2019/1021 EU Revised POPs regulation（EU）2019/1021	全部 All	有意添加(E8109-02) Intentionally	潤滑劑、塗料、穩定劑(電特性、阻燃性、防水性) 絕緣材料、阻燃劑 Lubricant, paint, stabilizer (electric haracteristic, flame-resistant,waterresistant) insulator, flame retardant							
					相關化學物質的代表性實例 Representative examples of relevant substance							
					<table><tr><th>多氯化萘 Polychlorinated naphthalenes</th><th>CAS No.</th></tr><tr><td>多氯化萘 Polychlorinated naphthalenes</td><td>70776-03-3</td></tr><tr><td>其它多氯化萘 Other polychlorinated naphthalenes</td><td>—</td></tr></table>	多氯化萘 Polychlorinated naphthalenes	CAS No.	多氯化萘 Polychlorinated naphthalenes	70776-03-3	其它多氯化萘 Other polychlorinated naphthalenes	—	
多氯化萘 Polychlorinated naphthalenes	CAS No.											
多氯化萘 Polychlorinated naphthalenes	70776-03-3											
其它多氯化萘 Other polychlorinated naphthalenes	—											
9	多氯三聯苯類 (PCT類) Polychlorinated terphenyls(PCTs)	・REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	均質材料的 homogeneous material 0.005wt% (50ppm)	絕緣油、潤滑油、電絕緣材料、溶劑、電解液、塑化劑、防火材料、電線和線纜用塗層劑介電密封劑 Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution, plasticizers, flame retardants, coatings for electricalwire and cable , dielectric sealants							
					相關化學物質的代表性實例 Representative examples of relevant substance							
					<table><tr><th>多氯三聯苯類（PCT類） Polychlorinated Terphenyls (PCTs)</th><th>CAS No.</th></tr><tr><td>PCT（多氯三聯苯類）(所有異構體和同系物) Polychlorinated Terphenyls (all isomers and congeners)</td><td>61788-33-8</td></tr></table>	多氯三聯苯類（PCT類） Polychlorinated Terphenyls (PCTs)	CAS No.	PCT（多氯三聯苯類）(所有異構體和同系物) Polychlorinated Terphenyls (all isomers and congeners)	61788-33-8			
多氯三聯苯類（PCT類） Polychlorinated Terphenyls (PCTs)	CAS No.											
PCT（多氯三聯苯類）(所有異構體和同系物) Polychlorinated Terphenyls (all isomers and congeners)	61788-33-8											
10	短鏈氯化石蠟類 (C10～13) (SCCPs) Shortchain chlorinated paraffins(C10～13) (SCCPs)	・與化學物質審查及生產等規制相關的法律（化審法） Japan Law concerning the evaluation of chemical substances ・EU新POPs規則（EC）2019/1021 EU Revised POPs regulation（EU）2019/1021	全部 All	產品的 of the product 0.1wt% (1,000ppm)	PVC塑化劑、阻燃劑 Plasticizer for PVC, flame retardant							
					相關化學物質的代表性實例 Representative examples of relevant substance							
					<table><tr><th>短鏈氯化石蠟類(C10～13) Shortchain chlorinated paraffins (C10～13)</th><th>CAS No.</th></tr><tr><td>氯烷烴C10-13 Alkanes, C10-13, chloro</td><td>85535-84-8</td></tr><tr><td>氯烷烴C10-12 Alkanes, C10-12, chloro</td><td>108171-26-2</td></tr><tr><td>氯烷烴C12-13 Alkanes, C12-13, chloro</td><td>71011-12-6</td></tr><tr><td>氯烷烴 Alkanes, chloro</td><td>61788-76-9</td></tr><tr><td>其它短鏈氯化石蠟 Other Short Chain Chlorinated Paraffins</td><td>—</td></tr></table>	短鏈氯化石蠟類(C10～13) Shortchain chlorinated paraffins (C10～13)	CAS No.	氯烷烴C10-13 Alkanes, C10-13, chloro	85535-84-8	氯烷烴C10-12 Alkanes, C10-12, chloro	108171-26-2	氯烷烴C12-13 Alkanes, C12-13, chloro
短鏈氯化石蠟類(C10～13) Shortchain chlorinated paraffins (C10～13)	CAS No.											
氯烷烴C10-13 Alkanes, C10-13, chloro	85535-84-8											
氯烷烴C10-12 Alkanes, C10-12, chloro	108171-26-2											
氯烷烴C12-13 Alkanes, C12-13, chloro	71011-12-6											
氯烷烴 Alkanes, chloro	61788-76-9											
其它短鏈氯化石蠟 Other Short Chain Chlorinated Paraffins	—											

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
11	聚氯乙烯(PVC)以及聚氯 乙烯混合物 Polyvinyl chloride (PVC) and PVC blends	• JS709 • IEC61249-2-21 • JPCA-ES01 2003 • IPC 4101	全部 All 包材相關參照(2) except packaging(2)	塑料材料中的鹵素含量 Halogen content in plastic materials in the plastic material total 0.09wt% (900ppm) 鉛(Pb)含量:依各法規要求,依使用 部,取最嚴標準:<300ppm Lead (Pb) content: According to the requirements of various regulations, according to the use department, the most stringent standard: <300ppm	絕緣性、耐化學品性、OHP膠片、護 套材料 Insulator, chemical resistance, transparency, sheath material
相關化學物質的代表性實例 Representative examples of relevant substance					
聚氯乙 烯 Polyvinyl chloride					CAS No.
聚氯乙 烯 (PVC) Polyvinyl chloride (PVC)					9002-86-2
其他聚氯乙 烯 Other Polyvinyl chlorides					—
PVC共聚物 PVC Copolymers					—
12	多溴聯苯類 (PBB類) Polybrominated biphenyls(PBBs)	• 2011/65/EU指令 Directive 2011/65/EU • POPs: Regulation (EU) 2019/1021	全部 All	均質材料的 in homogeneous material 0.1wt% (1,000ppm) EU指令	阻燃劑 Flame retardant 溴化阻燃劑: 常用電器、紡織品、塑 膠膜、筆記型電腦機殼的塑膠中 Brominated flame retardants: commonly used in electrical appliances, textiles, plastic films, notebook computer casings
相關化學物質的代表性實例 Representative examples of relevant substance					
PBB類 Polybrominated biphenyls (PBBs)					CAS No.
多溴聯苯類 Polybrominated Biphenyls					59536-65-1
4,4'-二溴聯苯 Dibromobiphenyl					92-86-4
2-溴代聯苯 2-Bromobiphenyl					55705
3-溴代聯苯 3-Bromobiphenyl					2113-57-7
4-溴代聯苯 4-Bromobiphenyl					92-66-0
三溴聯苯 Tribromobiphenyl					59080-34-1
四溴聯苯 Tetrabromobiphenyl					40088-45-7
五溴聯苯 Pentabromobiphenyl					56307-79-0
六溴聯苯 Hexabromobiphenyl					59080-40-9
六溴-1,1'-聯苯 Hexabromo-1,1'-biphenyl					36355-01-8
阻燃劑FF-1(Firemaster FF-1) Firemaster FF-1					67774-32-7
七溴聯苯 Heptabromobiphenyl					35194-78-6
八溴聯苯 Octabromobiphenyl					61288-13-9
九溴-1,1'-聯苯 Nonabromobiphenyl					27753-52-2
十溴聯苯 Decabromobiphenyl					13654-09-6
13	多溴聯苯 醚類 (PBDE類) Polybrominated diphenyl ethers (PBDEs)	• 2011/65/EU指令 Directive 2011/65/EU • 與化學物質審查及生產等規制相關的法律 (化 審法) Japan Law concerning the evaluation of chemical substances • EU POPs規則 (EC) 2019/1021 EU Revised POPs regulation (EU) 2019/1021 • U.S. Toxic Substance Control Act · TSCA 十溴二苯醚 Decabromodiphenyl ether (DecaBDE)	全部 All	有意添加(E8109-02) Intentionally 均質材料的 in homogeneous material 0.1wt% (1,000ppm) • 有意添加(E8109-02) Intentionally • 成型品中的PBDE類的合計為 0.05重量% (500ppm) 0.05% by weight (500 ppm) for the sum of PBDEs 十溴二苯醚 DecaBDE 禁止使用 N.D.	阻燃劑 Flame retardant 產品用的複合材料,燃燒中具防 火性能,常見電子電器和自動控 制設備、建材、紡織品、家具 等。 十溴聯苯醚DecaBDE 占阻燃劑總 量的75%以上。 With fire resistance, it is used in electronic appliances and automatic control equipment, building materials, textiles, furniture, etc. DecaBDE accounts for more than 75% of the total flame retardant.
相關化學物質的代表性實例 Representative examples of relevant substance					
PBDE類 Polybrominated diphenyl ethers (PBDEs)					CAS No.
一溴二苯醚 Bromodiphenyl ether					101-55-3
二溴二苯醚 Dibromodiphenyl ether					2050-47-7
三溴二苯醚 Tribromodiphenyl ether					49690-94-0
四溴二苯醚 Tetrabromodiphenyl ether					40088-47-9
五溴二苯醚 注:市售的PeBDPO均為含有多種溴化二苯醚 經過複雜反應後的混合物 Pentabromodiphenyl ether Note: Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyl oxides					32534-81-9 商業用PeBDPO的 CASNo. (CAS number used for commercial grades of PeBDPO)
六溴二苯醚 Hexabromodiphenyl ether					36483-60-0
七溴二苯醚 Heptabromodiphenyl ether					68928-80-3
八溴二苯醚 Octabromodiphenyl ether					32536-52-0
九溴二苯醚 Nonabromodiphenyl ether					63936-56-1
十溴二苯醚 Decabromodiphenyl ether (DecaBDE)					1163-19-5

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
14	有機錫化合物 (三丁基錫化合物、三苯基錫化合物) Tin organic ompounds (Tributyl tin ompounds, Triphenyl tin compounds)	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006 • 與化學物質審查及生產等規制相關的法律(化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally 作為錫元素、材料中的0.1wt% by weight of tin in a material (1,000ppm)	穩定劑、抗氧化劑、抗菌劑、防污劑、防腐劑、抗真菌劑、塗料、顏料、抗污劑 Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, paint, pigment, antistaining
		相關化學物質的代表性實例 Representative examples of relevant substance			
		有機錫化合物 Tin organic compounds			CAS No.
		三苯基錫N,N-二甲基二硫代氨基甲酸鹽 Triphenyltin-N, N-dimethyldithiocarbamate			1803-12-9
		三苯基錫氟化物 Triphenyltinfluoride			379-52-2
		三苯基錫乙酸鹽 Triphenyltinacetate			900-95-8
		三苯基錫氯化物 Triphenyltinchloride			639-58-7
		三苯基錫氫化物 Triphenyltinhydroxide			76-87-9
		三苯基錫脂肪酸鹽(C=9～11) Triphenyltin fattyacid((9-11)salt)			18380-71-7 , 18380-72-8 47672-31-1 , 94850-90-5
		三苯基錫氯醋酸鹽 Triphenyltinchloroacetate			7094-94-2
		三丁基錫甲基丙烯酸酯 Tributyltinmethacrylate			2155-70-6
		雙（三丁基錫）=富馬酸酯 Bis(tributyltin)fumalate			6454-35-9
		三丁基錫氟化物 Tributyltinfluoride			30593
		雙（三丁基錫）2,3-二溴丁二酸鹽 Bis(tributyltin)2,3-dibromosuccinate			31732-71-5
		三丁基錫乙酸鹽 Tributyltinacetate			56-36-0
		三丁基錫月桂酸鹽 Tributyltinlaurate			3090-36-6
		雙（三丁基錫）鄰苯二甲酸鹽 Bis(tributyltin)phthalate			4782-29-0
		烷基=丙烯酸酯,甲基=甲基丙烯酸酯,及三丁基錫=甲基丙烯酸酯的共聚化合物（烷基;C=8） Copolymer of alkyl (c=8) acrylate, methyl methacrylate and tributyltin methacrylate			67772-01-4
		三丁基錫=氨基磺酸鹽 Tributyltinsulfamate			6517-25-5
		雙（三丁基錫）馬來酸酯 Bis(tributyltin)maleate			14275-57-1
		三丁基錫氯化物 Tributyltinchloride			1461-22-9 , 7342-38-3
		三丁基錫=環戊烷羧酸鹽及其類似化合物(三丁基錫=環烷酸)的混合物 Tributyltin cyclopentane carbonate = mixture			85409-17-2
		三丁基錫=1,2,3,4,4a,4b,5,6,10,10a-十氫-7-異丙基-1,4a-二甲基-1-菲羧酸鹽和類似化合物的混合物(三丁基錫酪氨酸鹽) Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4adimethyl-1-phenanthrenecarboxylatemix			26239-64-5
		其它有機錫化合物 Other Tin organic compounds			—
15	三丁基氧化錫 (TBTO) Tributyl tin oxide (TBTO)	• 與化學物質審查及生產等規制相關的法律(化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally	防腐劑、防真菌劑、塗料、顏料、抗污劑、制冷劑、發泡劑、滅火劑、清潔劑 Antiseptic, antifungal agent , paint, pigment, antistaining, refrigerant, foaming agent, extinguishant, solvent cleaner
		相關化學物質的代表性實例 Representative examples of relevant substance			
		三丁基氧化錫 (TBTO)類 Tributyl tin oxide (TBTO)			CAS No.
		三丁基氧化錫（TBTO）Tributyl tin oxide (TBTO)			56-35-9

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
16	二丁基錫化合物 (DBT) Dibutyltin (DBT) compounds	• REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	作為錫元素、材料中的0.1wt% by weight of tin in a material (1,000ppm)	PVC穩定劑、矽樹脂和聚氨酯樹脂用的(固化)催化劑 Stabilizer for PVC, curing catalyst for silicone resin and urethane resin
					相關化學物質的代表性實例 Representative examples of relevant substance
					二丁基錫化合物(DBT類) Dibutyltin compoundsCAS No.
					二丁基錫氧化物 Dibutyltin oxide818-08-6
					二丁基錫乙酸鹽 Dibutyltin diacetate1067-33-0
					二丁基錫二月桂酸酯 Dibutyltin dilaurate77-58-7
					二丁基錫馬來酸酯 Dibutyltin maleate78-04-6
					其它二丁基錫化合物 Other dibutyltin compounds—
17	二辛基錫化合物 (DOT) Diocetyl tin (DOT) compounds	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	.直接與皮膚接觸的紡織品和皮革制品 (. textile and leather articles intended to come into contact with the skin.) .育兒用品(Childcare articles.) .雙成分模具含矽固形物(RTV-2成型工具)(Wocomponent room temperature vulcanisation moulding kits (RTV-2 moulding kits)	作為錫元素、材料中的0.1wt% by weight of tin in a material (1,000ppm)	PVC穩定劑、矽樹脂和聚氨酯樹脂用的(固化)催化劑 Stabilizer for PVC, curing catalyst for silicone resin and urethane resin
					相關化學物質的代表性實例 Representative examples of relevant substance
					二辛基錫化合物(DBT類) Dioctyltin compoundsCAS No.
					氧化二辛基錫 Dioctyl Tin Oxide870-08-6
					二月桂酸二正辛基錫 Dioctyltin dilaurate3648-18-8
					其它二辛基錫化合物 Other Dioctyltin compounds—
					相關化學物質的代表性實例 Representative examples of relevant substance
					石棉類 AsbestosCAS No.
18	石棉類 Asbestos	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	有意添加(E8109-02) Intentionally	制動襯墊、絕緣體、填充劑、研磨劑、顏料、塗料、滑石粉、隔熱材料 Insulator, filler, pigment, paint, talc
					相關化學物質的代表性實例 Representative examples of relevant substance
					石棉類 AsbestosCAS No.
					石棉類 Asbestos1332-21-4
					阳起石 Actinolite77536-66-4
					鐵閃石 Amosite (Grunerite)12172-73-5
					直閃石 Anthophyllite77536-67-5
					温石棉 Chrysotile12001-29-5
19	特定偶氮化合物 Specific AZO compounds	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	紡織品和皮革 Textiles and leather	成品紡織品/皮革制品的含量 of the finished textile/leather product : 0.003wt% (30ppm)	顏料、染料、人工色素 Pigment, dyes, colorants
					相關化學物質的代表性實例 Representative examples of relevant substance
					特定胺 Aromatic AminesCAS No.
					4-氨基苯 Biphenyl-4-ylamine92-67-1
					聯苯胺 Benzidine92-87-5
					4-氯-2-甲基苯胺 4-chloro-o-toluidine95-69-2
					2-萘胺 2-naphthylamine91-59-8
					鄰氨基偶氮甲苯 o-aminoazotoluene97-56-3
					5-硝基-鄰甲苯胺 5-nitro-o-toluidine99-55-8
					4-對氯苯胺 4-chloroaniline106-47-8
					4-二氨基苯甲醚 4-methoxy-m-phenylenediamine615-05-4
					4,4'-亞甲基二苯胺 4,4'-methylenedianiline101-77-9
					3,3'-二氯聯苯胺 3,3'-dichlorobenzidine91-94-1
					3,3'-二甲氧基聯苯胺 3,3'-dimethoxybenzidine119-90-4
					3,3'-二甲基聯苯胺 3,3'-dimethylbenzidine119-93-7
					4,4'-二氨基-3,3'-二甲基二苯甲烷 4,4'-diaminodiphenylmethane 3,3'dimethyl838-88-0
					6-甲氧基-m-甲苯胺 6-methoxy-m-toluidine120-71-8
					4,4'-亞甲基-雙 (2-氯苯胺) 4,4'-methylene-bis(2-chloroaniline)101-14-4
					4,4'-氧基二苯胺 4,4'-oxydianiline101-80-4
					4,4'-二氨基二苯硫化物 4,4'-thiodianiline139-65-1
					鄰甲苯胺 o-toluidine95-53-4
					4-甲基-m-亞苯基二胺 4-methyl-m-phenylenediamine95-80-7
					2,4,5-三甲基苯胺 2,4,5-trimethylaniline137-17-7
					鄰甲氧基苯胺 o-anisidine90-04-0
					4-氨基偶氮苯 4-amino azobenzene60-09-3
					(註)歐洲共同體的偶氮染料禁令適用於特定的偶氮染料和顏料，其偶氮基經過還原裂解，可生成上述22種芳香族胺中的一種。 (Note)The European Community's ban applies to azocolourants and azodyes that by reductive cleavage of azo groups may release one of the above 22 aromatic amines.

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																								
20	鄰苯二甲酸鹽類 Phthalates Bis(2-ethylhexyl) phthalate	• EU RoHS :2011/65/EU指令，新增併入 2015/863/EU(鄰苯二甲酸鹽類DEHP, DBP,BBP,DIBP) • 美國OEHHA加州65號提案 (DEHP/DBP/BBP/DNOP/DIDP/DINP) • Proposition 65 (DEHP/DBP/BBP/DNOP/DIDP/DINP)	全部 All	EU RoHS: 成形品之均質單項含量 0.1wt% (1,000ppm) • EU RoHS : in homogeneous material 0.1wt% (1,000ppm)	可塑劑、染料、顏料、塗料、墨水、粘接劑 plasticizer, ink, paints and adhesives																								
		• REACH規則 (EC)No.1907/2006的33條和7.2條 (SVHC批准候選名單) • 7.2 of REACH Regulation(EC) No 1907/2006 (Candidate list of SVHC for authorization) ,and REACH Article 33 and		• REACH 対象: 成形品之均質之 DEHP、DBP、BBP、DIBP含有量為單項或四項合計為0.1wt% (1,000ppm) • REACH :The content of DEHP, DBP, BBP, and DIBP in the homogenization of the molded product is single or four items in a total amount of 0.1 wt% (1,000 ppm)	包裝材料、銷售促銷材料，配件類中的可塑劑 Packaging material-Sales promotion materials, accessoriesNote																								
		• 美國特定洲包材規範 美國包裝材毒性物質訊息交流中心 (Toxics in Packaging Clearinghouse, TPCH)- * 美國19個州管制參照 19 U.S. states control reference https://toxicsinpackaging.org/model-legislation/	包材相關參照(2) except packaging(2) *豁免參照 Exempted Reference TPCH官網 ttps://toxicsinpackaging.org/model-legislation/	鄰苯二甲酸酯類 總濃度合計 <0.01wt% (100ppm) Total phthalates <0.01wt% (100ppm)	包裝材料、銷售促銷材料，配件類中的可塑劑 Plasticizers in packaging materials, sales promotion materials, accessories																								
		相關化學物質的代表性實例 Representative examples of relevant substance																											
		<table><tr><th>鄰苯二甲酸鹽 phthalates Bis(2-ethylhexyl) phthalate</th><th>CAS No.</th></tr><tr><td>鄰苯二甲酸(2-乙基己基酯) Di (2-ethylhexyl) phthalate (DEHP)</td><td>117-81-7</td></tr><tr><td>鄰苯二甲酸二丁酯 Di-n-butyl phthalate(DBP)</td><td>84-74-2</td></tr><tr><td>鄰苯二甲酸丁苄酯 Butyl benzyl phthaltes(BBP)</td><td>85-68-7</td></tr><tr><td>鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP)</td><td>84-69-5</td></tr><tr><td>鄰苯二甲酸二異壬酯 Diisononyl phthalate(technical mixture)(DINP)</td><td>28553-12-0 , 68515-48-0</td></tr><tr><td>鄰苯二甲酸二異癸酯 Diisodecyl phthalate(technical mixture)(DIDP)</td><td>26761-40-0 , 68515-49-1</td></tr><tr><td>鄰苯二甲酸二正辛酯 Di-n-octyl phthalate(DNOP)</td><td>117-84-0</td></tr><tr><td>鄰苯二甲酸二己酯 Di-n-hexyl phthalate(DNHP)</td><td>84-75-3</td></tr><tr><td>鄰苯二甲酸戊基異戊酯2-Benzenedicarboxylic acid,dipendylester,branched and linear</td><td>84777-06-2</td></tr><tr><td>磷苯二甲酸二異戊酯Diisopentylphthalate(DIPP)</td><td>605-50-5</td></tr><tr><td>鄰苯二甲酸正戊基異戊酯N-pentyl-isopentylphthalate</td><td>776297-69-9</td></tr></table>				鄰苯二甲酸鹽 phthalates Bis(2-ethylhexyl) phthalate	CAS No.	鄰苯二甲酸(2-乙基己基酯) Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	鄰苯二甲酸二丁酯 Di-n-butyl phthalate(DBP)	84-74-2	鄰苯二甲酸丁苄酯 Butyl benzyl phthaltes(BBP)	85-68-7	鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP)	84-69-5	鄰苯二甲酸二異壬酯 Diisononyl phthalate(technical mixture)(DINP)	28553-12-0 , 68515-48-0	鄰苯二甲酸二異癸酯 Diisodecyl phthalate(technical mixture)(DIDP)	26761-40-0 , 68515-49-1	鄰苯二甲酸二正辛酯 Di-n-octyl phthalate(DNOP)	117-84-0	鄰苯二甲酸二己酯 Di-n-hexyl phthalate(DNHP)	84-75-3	鄰苯二甲酸戊基異戊酯2-Benzenedicarboxylic acid,dipendylester,branched and linear	84777-06-2	磷苯二甲酸二異戊酯Diisopentylphthalate(DIPP)	605-50-5	鄰苯二甲酸正戊基異戊酯N-pentyl-isopentylphthalate	776297-69-9
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21	甲醛 Formaldehyde	• 美國/加利福尼亞州CARB規則 US/CA CARB Rule • 美國聯邦法111-199/TSCA 601項 US Federal Law 111-199/TSCA Section 601 • REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	複合木材(複合板、刨花板、中密度纖維板)產品或部件 Composite wood (plywood, particle board, medium density fiberboard)products or components	有意添加(E8109-02) Intentionally	音響櫃、售貨亭罩、黏著劑 Stereo cabinets, kiosk enclosures Adhesive																								
		• 甲醛限制§2.1990.2.12 Formaldehydverordnung,§2, February 12, 1990	紡織品 Textiles	紡織產品的 of textile product 0.0075wt% (75ppm)	紡織品 Textiles																								
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22	消耗臭氧層物質 Ozone depleting substances	• EU EC No.2037/2000 • EC 1005/2009	全部 All	有意添加(E8109-02) Intentionally	制冷劑、發泡劑、滅火劑、洗潔劑 Refrigerant, foaming agent, extinguishant, solvent cleaner																																								
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		<table><tr><th>消耗臭氧層物質（註＊） Ozone depleting substances (*)</th><th>CAS No.</th></tr><tr><td>三氯一氟甲烷(CFC-11) Trichlorofluoromethane (CFC-11)</td><td>75-69-4</td></tr><tr><td>二氯二氟甲烷(CFC-12) Dichlorodifluoromethane (CFC-12)</td><td>75-71-8</td></tr><tr><td>一氯三氟甲烷(CFC-13) Chlorotrifluoromethane (CFC-13)</td><td>75-72-9</td></tr><tr><td>五氯一氟乙烷(CFC-111) Pentachlorofluoroethane (CFC-111) 1,1-二氯乙烷(1,1 Dichlorodifluoromethane (CFC-12)</td><td>354-56-3</td></tr><tr><td>四氯二氟乙烷(CFC-112) 1,1,2,2-四氯-1,2-二氟乙烷(CFC-112) 1,1,1,2-四氯-2,2-二氟乙烷(CFC-112a) Tetrachlorodifluoroethane (CFC-112) 1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112) 1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)</td><td>76-12-0 76-12-0 76-11-9</td></tr><tr><td>三氟三氯乙烷(CFC-113) 1,1,2-三氟-1,2，2-三氯乙烷(CFC-113) 1,1,1-三氟-2,2，2-三氯乙烷(CFC-113a) Trichlorotrifluoroethane (CFC-113) 1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113) 1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)</td><td>76-13-1 76-13-1 354-58-5</td></tr><tr><td>1,2-二氯四氟乙烷(CFC-114) Dichlorotetrafluoroethane (CFC-114)</td><td>76-14-2</td></tr><tr><td>氯五氟乙烷(CFC-115) Monochloropentafluoroethane (CFC-115)</td><td>76-15-3</td></tr><tr><td>七氯一氟丙烷(CFC-211) 1,1,1,2,2,3,3-七氯-3-氟丙烷(CFC-211aa) 1,1,1,2,3,3,3-七氯-2-氟丙烷(CFC-211ba) Heptachlorofluoropropane (CFC-211) 1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa) 1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)</td><td>422-78-6 135401-87-5 422-78-6 422-81-1</td></tr><tr><td>六氯二氟丙烷(CFC-212) Hexachlorodifluoropropane (CFC-212)</td><td>3182-26-1</td></tr><tr><td>五氯三氟丙烷(CFC-213) Pentachlorotrifluoropropane (CFC-213)</td><td>2354-06-5， 134237-31-3</td></tr><tr><td>四氯四氟丙烷(CFC-214) 1,2,2,3-四氯-1,1,3,3-四氟丙烷(CFC-214aa) 1,1,1,3-四氯-2,2,3,3-四氟丙烷(CFC-214cb) Tetrachlorotetrafluoropropane (CFC-214) 1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa) 1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)</td><td>29255-31-0 29255-31-0 2268-46-4</td></tr></table>				消耗臭氧層物質（註＊） Ozone depleting substances (*)	CAS No.	三氯一氟甲烷(CFC-11) Trichlorofluoromethane (CFC-11)	75-69-4	二氯二氟甲烷(CFC-12) Dichlorodifluoromethane (CFC-12)	75-71-8	一氯三氟甲烷(CFC-13) Chlorotrifluoromethane (CFC-13)	75-72-9	五氯一氟乙烷(CFC-111) Pentachlorofluoroethane (CFC-111) 1,1-二氯乙烷(1,1 Dichlorodifluoromethane (CFC-12)	354-56-3	四氯二氟乙烷(CFC-112) 1,1,2,2-四氯-1,2-二氟乙烷(CFC-112) 1,1,1,2-四氯-2,2-二氟乙烷(CFC-112a) Tetrachlorodifluoroethane (CFC-112) 1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112) 1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)	76-12-0 76-12-0 76-11-9	三氟三氯乙烷(CFC-113) 1,1,2-三氟-1,2，2-三氯乙烷(CFC-113) 1,1,1-三氟-2,2，2-三氯乙烷(CFC-113a) Trichlorotrifluoroethane (CFC-113) 1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113) 1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)	76-13-1 76-13-1 354-58-5	1,2-二氯四氟乙烷(CFC-114) Dichlorotetrafluoroethane (CFC-114)	76-14-2	氯五氟乙烷(CFC-115) Monochloropentafluoroethane (CFC-115)	76-15-3	七氯一氟丙烷(CFC-211) 1,1,1,2,2,3,3-七氯-3-氟丙烷(CFC-211aa) 1,1,1,2,3,3,3-七氯-2-氟丙烷(CFC-211ba) Heptachlorofluoropropane (CFC-211) 1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa) 1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)	422-78-6 135401-87-5 422-78-6 422-81-1	六氯二氟丙烷(CFC-212) Hexachlorodifluoropropane (CFC-212)	3182-26-1	五氯三氟丙烷(CFC-213) Pentachlorotrifluoropropane (CFC-213)	2354-06-5， 134237-31-3	四氯四氟丙烷(CFC-214) 1,2,2,3-四氯-1,1,3,3-四氟丙烷(CFC-214aa) 1,1,1,3-四氯-2,2,3,3-四氟丙烷(CFC-214cb) Tetrachlorotetrafluoropropane (CFC-214) 1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa) 1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)	29255-31-0 29255-31-0 2268-46-4														
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五氯三氟丙烷(CFC-213) Pentachlorotrifluoropropane (CFC-213)	2354-06-5， 134237-31-3																																												
四氯四氟丙烷(CFC-214) 1,2,2,3-四氯-1,1,3,3-四氟丙烷(CFC-214aa) 1,1,1,3-四氯-2,2,3,3-四氟丙烷(CFC-214cb) Tetrachlorotetrafluoropropane (CFC-214) 1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa) 1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)	29255-31-0 29255-31-0 2268-46-4																																												
	消耗臭氧層物質-續 Ozone depleting substances (continued)	<table><tr><td>三氯五氟丙烷(CFC-215) Trichloropentafluoropropane (CFC-215) 1,2,2-三氯五氟丙烷(CFC-215aa) 1,2,2-Trichloropentafluoropropane (CFC-215aa) 1,2,3-三氯五氟丙烷(CFC-215ba) 1,2,3-Trichloropentafluoropropane (CFC-215ba) 1,1,2-三氯五氟丙烷(CFC-215bb) 1,1,2-Trichloropentafluoropropane (CFC-215bb) 1,1,3-三氯五氟丙烷(CFC-215ca) 1,1,3-Trichloropentafluoropropane (CFC-215ca) 1,1,1-三氯五氟丙烷(CFC-215cb) 1,1,1-Trichloropentafluoropropane (CFC-215cb)</td><td>1599-41-3 1599-41-3 76-17-5 — — 4259-43-2</td></tr><tr><td>二氯六氟丙烷(CFC-216) Dichlorohexafluoropropane (CFC-216)</td><td>661-97-2</td></tr><tr><td>一氯七氟丙烷(CFC-217) Chloroheptafluoropropane (CFC-217)</td><td>422-86-6</td></tr><tr><td>溴氯甲烷（哈龍-1011） Bromochloromethane (Halon-1011)</td><td>74-97-5</td></tr><tr><td>二溴二氟甲烷（哈龍-1202） Dibromodifluoromethane (Halon-1202)</td><td>75-61-6</td></tr><tr><td>溴氯二氟甲烷（哈龍-1211） Bromochlorodifluoromethane (Halon-1211)</td><td>353-59-3</td></tr><tr><td>三氟溴甲烷（哈龍-1301） Bromotrifluoromethane (Halon-1301)</td><td>75-63-8</td></tr><tr><td>二溴四氟乙烷（哈龍-2402） Dibromotetrafluoroethane (Halon-2402)</td><td>124-73-2</td></tr><tr><td>四氯化碳 Tetrachloromethane (carbon tetrachloride)</td><td>56-23-5</td></tr><tr><td>1,1,1-三氯乙烷（甲基氯仿） 1,1,1-Trichloroethane (methylchloroform)</td><td>71-55-6</td></tr><tr><td>溴甲烷 Bromomethane (methyl bromide)</td><td>74-83-9</td></tr><tr><td>溴乙烷 Bromoethane (ethyl bromide)</td><td>74-96-4</td></tr><tr><td>正丙基溴 1-Bromopropane (n-propyl bromide)</td><td>106-94-5</td></tr><tr><td>三氟碘甲烷（三氟甲基碘） Trifluoriodomethane (trifluoromethyl iodide)</td><td>2314-97-8</td></tr><tr><td>氯甲烷 Chloromethane (methyl chloride)</td><td>74-87-3</td></tr><tr><td>二溴氟甲烷(HBFC-21 B2) Dibromofluoromethane (HBFC-21 B2)</td><td>1868-53-7</td></tr><tr><td>溴二氟甲烷(HBFC-22 B1) Bromodifluoromethane (HBFC-22 B1)</td><td>1511-62-2</td></tr><tr><td>氟溴甲烷(HBFC-31 B1) Bromofluoromethane (HBFC-31 B1)</td><td>373-52-4</td></tr><tr><td>四溴氟乙烷(HBFC-121 B4) Tetrabromofluoroethane (HBFC-121 B4)</td><td>306-80-9</td></tr><tr><td>三溴二氟乙烷(HBFC-122 B3) Tribromodifluoroethane (HBFC-122 B3)</td><td>—</td></tr></table>				三氯五氟丙烷(CFC-215) Trichloropentafluoropropane (CFC-215) 1,2,2-三氯五氟丙烷(CFC-215aa) 1,2,2-Trichloropentafluoropropane (CFC-215aa) 1,2,3-三氯五氟丙烷(CFC-215ba) 1,2,3-Trichloropentafluoropropane (CFC-215ba) 1,1,2-三氯五氟丙烷(CFC-215bb) 1,1,2-Trichloropentafluoropropane (CFC-215bb) 1,1,3-三氯五氟丙烷(CFC-215ca) 1,1,3-Trichloropentafluoropropane (CFC-215ca) 1,1,1-三氯五氟丙烷(CFC-215cb) 1,1,1-Trichloropentafluoropropane (CFC-215cb)	1599-41-3 1599-41-3 76-17-5 — — 4259-43-2	二氯六氟丙烷(CFC-216) Dichlorohexafluoropropane (CFC-216)	661-97-2	一氯七氟丙烷(CFC-217) Chloroheptafluoropropane (CFC-217)	422-86-6	溴氯甲烷（哈龍-1011） Bromochloromethane (Halon-1011)	74-97-5	二溴二氟甲烷（哈龍-1202） Dibromodifluoromethane (Halon-1202)	75-61-6	溴氯二氟甲烷（哈龍-1211） Bromochlorodifluoromethane (Halon-1211)	353-59-3	三氟溴甲烷（哈龍-1301） Bromotrifluoromethane (Halon-1301)	75-63-8	二溴四氟乙烷（哈龍-2402） Dibromotetrafluoroethane (Halon-2402)	124-73-2	四氯化碳 Tetrachloromethane (carbon tetrachloride)	56-23-5	1,1,1-三氯乙烷（甲基氯仿） 1,1,1-Trichloroethane (methylchloroform)	71-55-6	溴甲烷 Bromomethane (methyl bromide)	74-83-9	溴乙烷 Bromoethane (ethyl bromide)	74-96-4	正丙基溴 1-Bromopropane (n-propyl bromide)	106-94-5	三氟碘甲烷（三氟甲基碘） Trifluoriodomethane (trifluoromethyl iodide)	2314-97-8	氯甲烷 Chloromethane (methyl chloride)	74-87-3	二溴氟甲烷(HBFC-21 B2) Dibromofluoromethane (HBFC-21 B2)	1868-53-7	溴二氟甲烷(HBFC-22 B1) Bromodifluoromethane (HBFC-22 B1)	1511-62-2	氟溴甲烷(HBFC-31 B1) Bromofluoromethane (HBFC-31 B1)	373-52-4	四溴氟乙烷(HBFC-121 B4) Tetrabromofluoroethane (HBFC-121 B4)	306-80-9	三溴二氟乙烷(HBFC-122 B3) Tribromodifluoroethane (HBFC-122 B3)	—
三氯五氟丙烷(CFC-215) Trichloropentafluoropropane (CFC-215) 1,2,2-三氯五氟丙烷(CFC-215aa) 1,2,2-Trichloropentafluoropropane (CFC-215aa) 1,2,3-三氯五氟丙烷(CFC-215ba) 1,2,3-Trichloropentafluoropropane (CFC-215ba) 1,1,2-三氯五氟丙烷(CFC-215bb) 1,1,2-Trichloropentafluoropropane (CFC-215bb) 1,1,3-三氯五氟丙烷(CFC-215ca) 1,1,3-Trichloropentafluoropropane (CFC-215ca) 1,1,1-三氯五氟丙烷(CFC-215cb) 1,1,1-Trichloropentafluoropropane (CFC-215cb)	1599-41-3 1599-41-3 76-17-5 — — 4259-43-2																																												
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溴氯甲烷（哈龍-1011） Bromochloromethane (Halon-1011)	74-97-5																																												
二溴二氟甲烷（哈龍-1202） Dibromodifluoromethane (Halon-1202)	75-61-6																																												
溴氯二氟甲烷（哈龍-1211） Bromochlorodifluoromethane (Halon-1211)	353-59-3																																												
三氟溴甲烷（哈龍-1301） Bromotrifluoromethane (Halon-1301)	75-63-8																																												
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1,1,1-三氯乙烷（甲基氯仿） 1,1,1-Trichloroethane (methylchloroform)	71-55-6																																												
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正丙基溴 1-Bromopropane (n-propyl bromide)	106-94-5																																												
三氟碘甲烷（三氟甲基碘） Trifluoriodomethane (trifluoromethyl iodide)	2314-97-8																																												
氯甲烷 Chloromethane (methyl chloride)	74-87-3																																												
二溴氟甲烷(HBFC-21 B2) Dibromofluoromethane (HBFC-21 B2)	1868-53-7																																												
溴二氟甲烷(HBFC-22 B1) Bromodifluoromethane (HBFC-22 B1)	1511-62-2																																												
氟溴甲烷(HBFC-31 B1) Bromofluoromethane (HBFC-31 B1)	373-52-4																																												
四溴氟乙烷(HBFC-121 B4) Tetrabromofluoroethane (HBFC-121 B4)	306-80-9																																												
三溴二氟乙烷(HBFC-122 B3) Tribromodifluoroethane (HBFC-122 B3)	—																																												

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
22	消耗臭氧層物質-續 Ozone depleting substances (continued)	1,2-二溴-1,1,2-三氟乙烷(HBFC-123 B2) Dibromotrifluoroethane (HBFC-123 B2)			354-04-1
		替氟烷(HBFC-124 B1) Bromotetrafluoroethane (HBFC-124 B1)			124-72-1
		三溴氟乙烷(HBFC-131 B3) Tribromofluoroethane (HBFC-131 B3)			—
		二溴二氟乙烷(HBFC-132 B2) Dibromodifluoroethane (HBFC-132 B2)			75-82-1
		2-溴-1,1,1-三氟乙烷(HBFC-133 B1) Bromotrifluoroethane (HBFC-133 B1)			421-06-7
		1,2-二溴氟乙烷(HBFC-141 B2) Dibromofluoroethane (HBFC-141 B2)			358-97-4
		溴二氟乙烷(HBFC-142 B1) Bromodifluoroethane (HBFC-142 B1)			420-47-3
		1-溴-2-氟乙烷(HBFC-151 B1) Bromofluoroethane (HBFC-151 B1)			762-49-2
		六溴氟丙烷(HBFC-221 B6) Hexabromofluoropropane (HBFC-221 B6)			—
		五溴二氟丙烷(HBFC-222 B5)Pentabromodifluoropropane (HBFC-222 B5)			—
		四溴三氟丙烷 (HBFC-223 B4)Tetrabromotrifluoropropane (HBFC-223 B4)			—
		三溴四氟丙烷 (HBFC 224-B3)Tribromotetrafluoropropane (HBFC-224 B3)			—
		二溴五氟丙烷(HBFC-225 B2) Dibromopentafluoropropane (HBFC-225 B2)			431-78-7
		1-溴-1,1,2,3,3,3-六氟丙烷(HBFC-226 B1) Bromohexafluoropropane (HBFC-226 B1)			2252-78-0
		五溴氟丙烷(HBFC-231 B5) Pentabromofluoropropane (HBFC-231 B5)			—
		四溴二氟丙烷(HBFC-232 B4) Tetrabromodifluoropropane (HBFC-232 B4)			—
		三溴三氟丙烷(HBFC-233 B3) Tribromotrifluoropropane (HBFC-233 B3)			—
		二溴四氟丙烷 (HBFC-234 B2) Dibromotetrafluoropropane (HBFC-234 B2)			—
		溴五氟丙烷 (HBFC-235 B1) Bromopentafluoropropane (HBFC-235 B1)			460-88-8
		四溴氟丙烷 (HBFC-241 B4) Tetrabromofluoropropane (HBFC-241 B4)			—
		三溴二氟丙烷 (HBFC-242 B3) Tribromodifluoropropane (HBFC-242 B3)			70192-80-2
		二溴三氟丙烷 (HBFC-243 B2) Dibromotrifluoropropane (HBFC-243 B2)			431-21-0
		溴四氟丙烷 (HBFC-244 B1) Bromotetrafluoropropane (HBFC-244 B1)			679-84-5
		三溴氟丙烷 (HBFC-251 B3) Tribromofluoropropane (HBFC-251 B3)			75372-14-4
		二溴二氟丙烷 (HBFC-252 B2) Dibromodifluoropropane (HBFC-252 B2)			460-25-3
		溴三氟丙烷 (HBFC-253 B1) Bromotrifluoropropane (HBFC-253 B1)			421-46-5
		二溴氟丙烷 (HBFC-261 B2) Dibromofluoropropane (HBFC-261 B2)			51584-26-0
		溴二氟丙烷 (HBFC-262 B1) Dibromofluoropropane (HBFC-261 B2)			—
		溴氟丙烷 (HBFC-271 B1) Bromofluoropropane (HBFC-271 B1)			1871-72-3
		二氯氟甲烷 (HCFC-21) Dichlorofluoromethane (HCFC-21)			75-43-4
		氯二氟甲烷 (HCFC-22) Chlorodifluoromethane (HCFC-22)			75-45-6
		氯氟甲烷 (HCFC-31) Chlorofluoromethane (HCFC-31)			593-70-4
		四氯氟乙烷 (HCFC-121) 1,1,2,2-四氯-1-氟乙烷 (HCFC-121) 1,1,1,2-四氯-2-氟乙烷 (HCFC-121a) Tetrachlorofluoroethane (HCFC-121) 1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121) 1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a)			134237-32-4 354-14-3 354-11-0
		三氯二氟乙烷 (HCFC-122) 1,2,2-三氯-1,1-二氟乙烷 (HCFC-122) 1,1,2-三氯-1,2-二氟乙烷 (HCFC-122a) 1,1,1-三氯-2,2-二氟乙烷 (HCFC-122b) Trichlorodifluoroethane (HCFC-122) 1,2,2-Trichloro-1,1-difluoroethane (HCFC-122) 1,1,2-Trichloro-1,2-difluoroethane (HCFC-122a) 1,1,1-Trichloro-2,2-difluoroethane (HCFC-122b)			41834-16-6 354-21-2 354-15-4 354-12-1

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
22	消耗臭氧層物質-續 Ozone depleting substances (continued)	二氯三氟乙烷（HCFC-123） 1,1-二氯-2,2,2-三氟乙烷（HCFC-123） 1,2-二氯-1,1,2-三氟乙烷（HCFC-123a） 1,1-二氯-1,2,2-三氟乙烷（HCFC-123b） Dichlorotrifluoroethane(HCFC-123) 1,1-Dichloro-2,2,2-trifluoroethane (HCFC-123) 1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a) 1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)			34077-87-7 306-83-2 354-23-4 90454-18-5 812-04-4
		氯四氟乙烷（HCFC-124） 2-氯-1,1,1,2-四氟乙烷（HCFC-124） 1-氯-1,1,2,2-四氟乙烷（HCFC-124a） Chlorotetrafluoroethane (HCFC-124) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124) 1-chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)			63938-10-3 2837-89-0 354-25-6
		三氯氟乙烷（HCFC-131） Trichlorofluoroethane (HCFC-131) 1,1,2-三氯-2-氟乙烷（HCFC-131） 1,1,2-Trichloro-2-fluoroethane (HCFC-131) 1,1,2-三氯-1-氟乙烷（HCFC-131a） 1,1,2-Trichloro-1-fluoroethane (HCFC131a) 1,1,1-三氯-2-氟乙烷（HCFC-131b） 1,1,1-Trichloro-2-fluoroethane (HCFC-131b)			27154-33-2； (134237-34-6) 359-28-4 811-95-0 2366-36-1
		二氯二氟乙烷（HCFC-132） Dichlorodifluoroethane (HCFC-132) 1,2-二氯-1,2-二氟乙烷（HCFC-132） 1,2-Dichloro-1,2-difluoroethane (HCFC-132) 1,1-二氯-2,2-二氟乙烷（HCFC-132a） 1,1-Dichloro-2,2-difluoroethane (HCFC-132a) 1,2-二氯-1,1-二氟乙烷（HCFC-132b） 1,2-Dichloro-1,1-difluoroethane (HCFC-132b) 1,1-二氯-1,2-二氟乙烷（HCFC-132c） 1,1-Dichloro-1,2-difluoroethane (HCFC-132c)			25915-78-0 431-06-1 471-43-2 1649-08-7 1842-05-3
		氯三氟乙烷（HCFC-133） Chlorotrifluoroethane (HCFC-133) 1-氯-1,2,2-三氟乙烷（HCFC-133） 1-Chloro-1,2,2-trifluoroethane (HCFC-133) 2-氯-1,1,1-三氟乙烷（HCFC-133a） 2-Chloro-1,1,1-trifluoroethane (HCFC-133a) 1-氯-1,1,2-三氟乙烷（HCFC-133b） 1-Chloro-1,1,2-trifluoroethane (HCFC-133b)			1330-45-6 431-07-2 1330-45-6 75-88-7 421-04-5
		二氯氟乙烷（HCFC-141） Dichlorofluoroethane(HCFC-141) 1,2-二氯-1-氟乙烷（HCFC-141） 1,2-Dichloro-1-fluoroethane (HCFC-141) 1,1-二氯-2-氟乙烷（HCFC-141a） 1,1-Dichloro-2-fluoroethane (HCFC-141a) 1,1-二氯-1-氟乙烷（HCFC-141b） 1,1-Dichloro-1-fluoroethane (HCFC-141b)			1717-00-6 (25167-88-8) 430-57-9 430-53-5 1717-00-6
		氯二氟乙烷（HCFC-142） Chlorodifluoroethane (HCFC-142) 2-氯-1,1-二氟乙烷（HCFC-142） 2-Chloro-1,1-Difluoroethane (HCFC-142) 1-氯-1,1-二氟乙烷（HCFC-142b） 1-Chloro-1,1-difluoroethane (HCFC-142b) 1-氯-1,2-二氟乙烷（HCFC-142a） 1-Chloro-1,2-difluoroethane (HCFC-142a)			25497-29-4 338-65-8 75-68-3 338-64-7
		氟氯乙烷（HCFC-151） Chlorofluoroethane (HCFC-151) 1-氯-2-氟乙烷（HCFC-151） 1-Chloro-2-fluoroethane (HCFC-151) 1-氯-1-氟乙烷（HCFC-151a） 1-Chloro-1-fluoroethane (HCFC-151a)			110587-14-9 762-50-5 1615-75-4
		六氯氟丙烷（HCFC-221） Hexachlorofluoropropane (HCFC-221) 1,1,1,2,2,3-六氯-3-氟丙烷（HCFC-221ab） 1,1,1,2,2,3-Hexachloro-3-fluoropropane (HCFC-221ab)			134237-35-7，29470-94-8， 422-26-4
		五氯二氟丙烷（HCFC-222） Pentachlorodifluoropropane (HCFC-222) 1,1,1,3,3-五氯-2,2-二氟丙烷（HCFC-222ca） 1,1,1,3,3-pentachloro-2,2-difluoropropane (HCFC-222ca) 1,2,2,3,3-五氯-1,1-二氟丙烷（HCFC-222aa） 1,2,2,3,3-pentachloro-1,1-difluoropropane (HCFC-222aa)			134237-36-8 422-49-1 422-30-0
		四氯三氟丙烷（HCFC-223） Tetrachlorotrifluoropropane (HCFC-223) 1,1,3,3-四氯-1,2,2-三氟丙烷（HCFC-223ca） 1,1,3,3-Tetrachloro-1,2,2-trifluoropropane (HCFC-223ca) 1,1,1,3-四氯-2,2,3-三氟丙烷（HCFC-223cb） 1,1,1,3-Tetrachloro-2,2,3-trifluoropropane (HCFC-223cb)			134237-37-9 422-52-6 422-50-4
		三氯四氟丙烷（HCFC-224） 1,3,3-三氯-1,1,2,2-四氟丙烷（HCFC-224ca） 1,1,3-三氯-1,2,2,3-四氟丙烷（HCFC-224cb） 1,1,1-三氯-2,2,3,3-四氟丙烷（HCFC-224cc） Trichlorotetrafluoropropane (HCFC-224) 1,3,3-Trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca) 1,1,3-Trichloro-1,2,2,3-tetrafluoropropane (HCFC-224cb) 1,1,1-Trichloro-2,2,3,3-tetrafluoropropane (HCFC-224cc)			134237-38-0 422-54-8 422-53-7 422-51-7

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
22	消耗臭氧層物質-續 Ozone depleting substances (continued)	二氯五氟丙烷 (HCFC-225) 2,2-二氯-1,1,1,3-五氟丙烷 (HCFC-225aa) 2,3-二氯-1,1,1,2,3-五氟丙烷 (HCFC-225ba) 1,2-二氯-1,1,2,3,3-五氟丙烷 (HCFC-225bb) 3,3-二氯-1,1,1,2,2-五氟丙烷 (HCFC-225ca) 1,3-二氯-1,1,2,2,3-五氟丙烷 (HCFC-225cb) 1,1-二氯-1,2,2,3,3-五氟丙烷 (HCFC-225cc) 1,2-二氯-1,1,3,3,3-五氟丙烷 (HCFC-225da) 1,3-二氯-1,1,2,3,3-五氟丙烷 (HCFC-225ea) 1,1-二氯-1,2,3,3,3-五氟丙烷 (HCFC-225eb) Dichloropentafluoropropane (HCFC-225) 2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC-225aa) 2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba) 1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb) 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca) 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb) 1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC-225cc) 1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da) 1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea) 1,1-Dichloro-1,2,3,3,3-pentafluoropropane(HCFC-225eb)			127564-92-5 128903-21-9 422-48-0 422-44-6 422-56-0 507-55-1 13474-88-9 431-86-7 136013-79-1 111512-56-2
		氯六氟丙烷 (HCFC-226) 2-氯-1,1,1,3,3,3-六氟丙烷 (HCFC-226da) Chlorohexafluoropropane (HCFC-226) 2-Chloro-1,1,1,3,3,3-hexafluoro-propane (HCFC-226da)			134308-72-8 431-87-8
		五氯氟丙烷 (HCFC-231) 1,1,1,2,3-五氯-2-氟丙烷 (HCFC-231bb) Pentachlorofluoropropane (HCFC-231) 1,1,1,2,3-pentachloro-2-fluoro-propane (HCFC-231bb)			134190-48-0 421-94-3
		四氯二氟丙烷 (HCFC-232) 1,1,1,3-四氯-3,3-二氟丙烷 (HCFC-232fc) Tetrachlorodifluoropropane (HCFC-232) 1,1,1,3-Tetrachloro-3,3-difluoropropane (HCFC-232fc)			134237-39-1 460-89-9
		三氯三氟丙烷 (HCFC-233) 1,1,1-三氯-3,3,3-三氟丙烷 (HCFC-233fb) Trichlorotrifluoropropane (HCFC-233) 1,1,1-Trichloro-3,3,3-trifluoropropane (HCFC-233fb)			134237-40-4 7125-83-9
		二氯四氟丙烷 (HCFC-234) 1,2-二氯-1,2,3,3-四氟丙烷 (HCFC-234db) Dichlorotetrafluoropropane (HCFC-234) 1,2-Dichloro-1,2,3,3-tetrafluoropropane (HCFC-234db)			127564-83-4 425-94-5
		氯五氟丙烷 (HCFC-235) 1-氯-1,1,3,3,3-五氟丙烷 (HCFC-235fa) Chloropentafluoropropane (HCFC-235) 1-Chloro-1,1,3,3,3-pentafluoropropane (HCFC-235fa)			134237-41-5 460-92-4
		四氯氟丙烷 (HCFC-241) 1,1,2,3-四氯-1-氟丙烷 (HCFC-241db) Tetrachlorofluoropropane (HCFC-241) 1,1,2,3-Tetrachloro-1-fluoropropane (HCFC-241db)			134190-49-1 666-27-3
		三氯二氟丙烷 (HCFC-242) 1,3,3-三氯-1,1-二氟丙烷 (HCFC-242fa) Trichlorodifluoropropane (HCFC-242) 1,3,3-Trichloro-1,1-difluoropropane (HCFC-242fa)			134237-42-6 460-63-9
		二氯三氟丙烷 (HCFC-243) 1,1-二氯-1,2,2-三氟丙烷 (HCFC-243cc) 2,3-二氯-1,1,1-三氟丙烷 (HCFC-243db) 3,3-二氯-1,1,1-三氟丙烷 (HCFC-243fa) Dichlorotrifluoropropane (HCFC-243) 1,1-Dichloro-1,2,2-trifluoropropane (HCFC-243cc) 2,3-Dichloro-1,1,1-trifluoropropane (HCFC-243db) 3,3-Dichloro-1,1,1-trifluoropropane (HCFC-243fa)			134237-43-7 7125-99-7 338-75-0 460-69-5
		氯四氟丙烷 (HCFC-244) 3-氯-1,1,2,2-四氟丙烷 (HCFC-244ca) 1-氯-1,1,2,2-四氟丙烷 (HCFC-244cc) Chlorotetrafluoropropane (HCFC-244) 3-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244ca) 1-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244cc)			134190-50-4 679-85-6 421-75-0

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																
22	消耗臭氧層物質-續 Ozone depleting substances (continued)	三氯氟丙烷（HCFC-251） 1,1,3-三氯-1-氟丙烷（HCFC-251fb） 1,1,2-三氯-1-氟丙烷（HCFC-251dc） Trichlorofluoropropane (HCFC-251) 1,1,3-Trichloro-1-fluoropropane (HCFC-251fb) 1,1,2-Trichloro-1-fluoropropane (HCFC-251dc)			134190-51-5 818-99-5 421-41-0																
		二氯二氟丙烷（HCFC-252） 1,3-二氯-1,1-二氟丙烷（HCFC-252fb） Dichlorodifluoropropane (HCFC-252) 1,3-Dichloro-1,1-difluoropropane (HCFC-252fb)			134190-52-6 819-00-1																
		氯三氟丙烷（HCFC-253） 3-氯-1,1,1-三氟丙烷（HCFC-253fb） Chlorotrifluoropropane (HCFC-253) 3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)			134237-44-8 460-35-5																
		二氯氟丙烷（HCFC-261） 1,1-二氯-1-氟丙烷（HCFC-261fc） 1,2-二氯-2-氟丙烷（HCFC-261ba） Dichlorofluoropropane (HCFC-261) 1,1-Dichloro-1-fluoropropane (HCFC-261fc) 1,2-Dichloro-2-fluoro-propane (HCFC-261ba)			134237-45-9 7799-56-6 420-97-3																
		氯二氟丙烷（HCFC-262） 1-氯-2,2-二氟丙烷（HCFC-262ca） 2-氯-1,3-二氟丙烷（HCFC-262da） 1-氯-1,1-二氟丙烷（HCFC-262fc） Chlorodifluoropropane (HCFC-262) 1-Chloro-2,2-difluoropropane (HCFC-262ca) 2-Chloro-1,3-difluoropropane (HCFC-262da) 1-Chloro-1,1-difluoropropane (HCFC-262fc)			134190-53-7 420-99-5 102738-79-4 421-02-3																
		氯氟丙烷（HCFC-271） 2-氯-2-氟丙烷（HCFC-271ba） 1-氯-1-氟丙烷（HCFC-271fb） Chlorofluoropropane (HCFC-271) 2-Chloro-2-fluoropropane (HCFC-271ba) 1-Chloro-1-fluoropropane (HCFC-271fb)			134190-54-8 420-44-0 430-55-7																
(註※)這些物質中可能包含未在此處列舉出的同分異構體。附有CAS No. 的同分異構體均為可獲取時予以添加。*Note: These substances may contain further isomers that are not listed here.Isomers with CAS numbers have been included when available.																					
23	放射性物質 Radioactive substances	• EU-D 96/29/歐洲原子能共同體 EU-D 96/29/Euratom • 核子原料、核子燃料及核反應堆規制相關的日本法律、1986年 Japan Law for the Regulation of Nuclear Source Material,Nuclear Fuel Material,and Reactors, 1986 • 放射性污染防治法(日本) Japan Law Concerning Prevention from Radiation Hazards	全部 All	有意添加(E8901-02) Intentionally	光學特性(鈾) 測量儀器、儀表、檢測器 Optical properties(thorium), measuring devices, gauges, detector																
		相關化學物質的代表性實例 Representative examples of relevant substance																			
		<table><tr><th>放射性物質 Radioactive substances</th><th>CAS No.</th></tr><tr><td>鈾-238 Uranium-238</td><td>7440-61-1</td></tr><tr><td>氡 Radon</td><td>10043-92-2</td></tr><tr><td>鐳-241 Americium-241</td><td>14596-10-2</td></tr><tr><td>釷-232 Thorium-232</td><td>7440-29-1</td></tr><tr><td>銫-137 Cesium-137</td><td>10045-97-3</td></tr><tr><td>銣-90 Strontium-90</td><td>10098-97-2</td></tr><tr><td>其他放射性物質 Other radioactive substances</td><td>—</td></tr></table>				放射性物質 Radioactive substances	CAS No.	鈾-238 Uranium-238	7440-61-1	氡 Radon	10043-92-2	鐳-241 Americium-241	14596-10-2	釷-232 Thorium-232	7440-29-1	銫-137 Cesium-137	10045-97-3	銣-90 Strontium-90	10098-97-2	其他放射性物質 Other radioactive substances	—
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No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																												
24	全氟辛烷磺酸 (PFOS) 及其鹽類和 PFOS 相關化合物 Perfluorohexanesulphonic acid (PFOS), its salts and PFOS-related substances	- 與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances - 限制全氟辛烷磺酸銷售及使用的指令 EU Directive 2006/122 - 持久性有機污染物POPs法規 POPs: Regulation (EU) 2019/1021 - ECHA (REACH) 高度關注物質(SVHC) ECHA SVHCs - 美國OEHHA 加州65號提案 Proposition 65	全部 All 包材相關參照(2) except packaging(2)	有意添加 Intentionally - 均質材料的 in homogeneous material 0.1wt% (1,000ppm) - 混合物或物質中的合計為 0.001% (10ppm) 0.001% by weight (10 ppm) of PFOS including its salts in a mixture or an article - 纖維或者塗層后的材料中1μg/ m² 1 μg/m2 in textiles or coated material - 產品含有加標"加州65警告標示" Products contain added "California 65 Warning Labels"	光致抗蝕劑、抗反射塗層劑、膠片、紙、照片塗層劑 電鍍防霧劑、電鍍工序中使用的潤滑油 Photoresist, anti-reflection coating agent, film, per, photos coatings,plating mist inhibitor, lubricating oil used in the electroplating process																												
		相關化學物質的代表性實例 Representative examples of relevant substance																															
		<table><tr><th>PFOS化合物 PFOS compounds</th><th>CAS No.</th></tr><tr><td>全氟辛烷磺酸鹽 (PFOS) Perfluorooctane Sulfonates (PFOS) C8F17SO2X (X為OR、NR或其他衍生產品) C8F17SO2X, where X = OR, NR or other derivative</td><td>1763-23-1</td></tr><tr><td>全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors</td><td>—</td></tr><tr><td>全氟辛基磺酸胺 Perfluorooctane Sulfonic Acid (PFOS)</td><td>29081-56-9</td></tr><tr><td>全氟辛基磺酸鉀 perfluorooctane sulfonate</td><td>2795-39-3</td></tr><tr><td>十七氟-1-辛烷磺酸鉀 Potassium perfluorooctane sulfonate</td><td>29457-72-5</td></tr><tr><td>全氟辛烷磺酸二乙醇胺盐 Lithium heptadecafluoro-1-octanesulfonate</td><td>70225-14-8</td></tr><tr><td>全氟辛基磺酰氟 Perfluorooctanesulfonic acid diethanolamine salt</td><td>307-35-7</td></tr><tr><td>甲基丙烯酸N-乙基全氟辛烷磺酰胺基乙酯 N-Ethyl perfluorooctanesulfonamidoethyl methacrylate</td><td>376-14-7</td></tr><tr><td>N-乙基全氟辛基磺酰胺乙醇 N-Ethylperfluorooctanesulfonamide ethanol</td><td>1691-99-2</td></tr><tr><td>十七氟-N-(2-羥乙基) Heptadecafluoro-N-(2-hydroxyethyl)</td><td>24448-09-7</td></tr><tr><td>N-乙基全氟辛烷磺酰胺 N-Ethylperfluorooctanesulfonamide</td><td>4151-50-2</td></tr><tr><td>十七氟-N-甲基-辛磺酰胺 Heptafluoro-N-methyl-octansulfonamide</td><td>31506-32-8</td></tr><tr><td colspan="2">其他 Others:</td></tr></table>				PFOS化合物 PFOS compounds	CAS No.	全氟辛烷磺酸鹽 (PFOS) Perfluorooctane Sulfonates (PFOS) C8F17SO2X (X為OR、NR或其他衍生產品) C8F17SO2X, where X = OR, NR or other derivative	1763-23-1	全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors	—	全氟辛基磺酸胺 Perfluorooctane Sulfonic Acid (PFOS)	29081-56-9	全氟辛基磺酸鉀 perfluorooctane sulfonate	2795-39-3	十七氟-1-辛烷磺酸鉀 Potassium perfluorooctane sulfonate	29457-72-5	全氟辛烷磺酸二乙醇胺盐 Lithium heptadecafluoro-1-octanesulfonate	70225-14-8	全氟辛基磺酰氟 Perfluorooctanesulfonic acid diethanolamine salt	307-35-7	甲基丙烯酸N-乙基全氟辛烷磺酰胺基乙酯 N-Ethyl perfluorooctanesulfonamidoethyl methacrylate	376-14-7	N-乙基全氟辛基磺酰胺乙醇 N-Ethylperfluorooctanesulfonamide ethanol	1691-99-2	十七氟-N-(2-羥乙基) Heptadecafluoro-N-(2-hydroxyethyl)	24448-09-7	N-乙基全氟辛烷磺酰胺 N-Ethylperfluorooctanesulfonamide	4151-50-2	十七氟-N-甲基-辛磺酰胺 Heptafluoro-N-methyl-octansulfonamide	31506-32-8	其他 Others:	
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其他 Others:																																	
24	全氟辛酸铵(PFOA)及其鹽類PFOA相關物质(续) Perfluorooctanoic acid (PFOA) and its salts.	- 持久性有機污染物POPs法規 (EU) 2019/1021 POPs: Regulation (EU) 2019/1021 - EU 規範實驗室檢驗規則:CEN/TS 15968 EU Specification Laboratory Inspection Rules: CEN/TS 15968 - ECHA (REACH) 高度關注物質(SVHC) ECHA SVHC - 美國OEHHA 加州65號提案 Proposition 65	全部 All 包材相關參照(2) except packaging(2)	均質材料 in homogeneous material - 成品含有PFOA(及其鹽類) 濃度小於等於 25 ppb (25ppb=0.025ppm) The finished product contains PFOA (and its salts) concentration of 25ppb - 成品中含單一或多種相關物質總濃度:小於等於1000ppb (1 ppm) *1ppb=0.001ppm The finished product contains PFOA (and its salts) concentration of 1000ppb (0.1ppm) - 產品含有加標"加州65警告標示" Products contain added "California 65 Warning Labels"	半導體用、滅火劑、防水劑、紙張表面處理劑、樹脂改性劑、離型劑、鐵氟龍前驅物(FEP,PTFE,PBT粉末) Semiconductor,extinguishing agent,water epellent, paper surface-treating agent, and plastic modifier、Teflon(FEP,PTFE,PBT)																												
		相關化學物質的代表性實例 Representative examples of relevant substance																															
		<table><tr><th>PFOA類 PFOAs</th><th>CAS No.</th></tr><tr><td>全氟辛酸 Perfluorooctanoic acid</td><td>335-67-1</td></tr><tr><td>全氟辛酸及其鹽類 Perfluorooctanoic acid and its salts</td><td>335-95-5、2395-00-8、335-93-3</td></tr><tr><td>全氟辛酸铵(十五氟辛酸甲酯) Ammonium pentadecafluorooctanoate</td><td>3825-26-1</td></tr><tr><td>全氟辛酸甲酯 (十五氟辛酸甲酯) Methyl perfluorooctanoate</td><td>376-27-2</td></tr><tr><td>全氟辛酸乙酯 Ethyl perfluorooctanoate</td><td>3108-24-5</td></tr><tr><td>全氟辛酰氟 Pentadecafluorooctyl fluoride</td><td>335-66-0</td></tr><tr><td>全氟壬酸及其鹽類 Perfluorononanoic acid (PFNA) and its salts - 美國OEHHA 加州65號提案 Proposition 65 </td><td>375-95-1</td></tr><tr><td>全氟羧酸(C9-C14 PFCA) 及其鹽類 Perfluorocarboxylic acids and their salts Compounds - REACH附錄十七 - Annex XVII to Regulation (EC) No 1907/2006 </td><td></td></tr></table>				PFOA類 PFOAs	CAS No.	全氟辛酸 Perfluorooctanoic acid	335-67-1	全氟辛酸及其鹽類 Perfluorooctanoic acid and its salts	335-95-5、2395-00-8、335-93-3	全氟辛酸铵(十五氟辛酸甲酯) Ammonium pentadecafluorooctanoate	3825-26-1	全氟辛酸甲酯 (十五氟辛酸甲酯) Methyl perfluorooctanoate	376-27-2	全氟辛酸乙酯 Ethyl perfluorooctanoate	3108-24-5	全氟辛酰氟 Pentadecafluorooctyl fluoride	335-66-0	全氟壬酸及其鹽類 Perfluorononanoic acid (PFNA) and its salts 美國OEHHA 加州65號提案 Proposition 65	375-95-1	全氟羧酸(C9-C14 PFCA) 及其鹽類 Perfluorocarboxylic acids and their salts Compounds - REACH附錄十七 - Annex XVII to Regulation (EC) No 1907/2006											
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全氟辛酰氟 Pentadecafluorooctyl fluoride	335-66-0																																
全氟壬酸及其鹽類 Perfluorononanoic acid (PFNA) and its salts 美國OEHHA 加州65號提案 Proposition 65	375-95-1																																
全氟羧酸(C9-C14 PFCA) 及其鹽類 Perfluorocarboxylic acids and their salts Compounds - REACH附錄十七 - Annex XVII to Regulation (EC) No 1907/2006																																	

	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use				
24	全氟和多氟烷基物質 (PFAS) 包含長鏈烷基羧酸鹽類(LCPFAC) Perfluorononanoic acid (PFAs) and its salts and (LCPFAC)	· ECHA (REACH) 高度關注物質 ECHA SVHC · 美國OEHHA 加州65號提案 Proposition 65 · 美國/加利福尼亞州 AB1817 US California AB1817	全部 All	均質材料 in homogeneous material · 成品含有PFAS(及其鹽類) 濃度小於等於 25 ppb (25ppb=0.025ppm) The finished product contains PFAS (and its salts) concentration of 25ppb · 成品中含單一或多種相關物質總濃度小於等於250ppb (0.25 ppm) The finished product contains PFAS (and its salts) concentration of 250ppb (0.25ppm) · PFAS聚合物要求總F > 50ppm Total fluorine contributed by PFAS concentration of 50ppm · 產品含有加標"加州65警告標示" Products contain added "California 65 Warning Labels" · 纖維材料中總有機氟的 0.01wt%(100ppm) 0.01% by weights(100ppm) of total organic fluorine in Textile articles	食品包裝、包材、地毯、皮革、塑膠、橡膠、紙張、牙線和炊具、防水劑、表面塗層、纖維材料(全部或部分使用纖維的服飾,裝飾品,手袋,手提包,手帕,吊帶等的產品)。 Food packaging, packaging materials. Carpet, leather, plastic, rubber, paper, dental floss and cookware Water repellent, surface coating "Textile articles" refers to apparel, accessories, backpacks, handbags, carrying cases, straps, and other products made entirely or partially of textiles.				
						從2026 年 1 月 1 日起，最大濃度值將有以下更改。 The following thresholds shall apply from January 1, 2026 (From one year prior to the effective date). · 纖維材料中總有機氟的 0.005 wt%(50ppm) · 0.005% by weights(50ppm) of total organic fluorine in material			
						相關化學物質群與管制其使用的法令 Related chemical substance groups and laws governing their use			
						1.全氟己酸 (PFHxA)及其鹽類和相關物質 undecafluorohexanoic acid (PFHxA), its salts and related substances · REACH附錄十七 · Annex XVII to Regulation (EC) No 1907/2006 · 美國特定制 包材法案 TPCH (Toxics in Packaging Clearinghouse, TPCH)			
						PFHxAs 是全氟烷基物質和多氟烷基物質 (PFAS) 的一個亞組。(短鏈六碳) PFHxAs are a subgroup of per- and polyfluoroalkyl substances (PFAS) (C6)			
						2.全氟羧酸(C9-C14 PFCA) 及其鹽類 Perfluorocarboxylic acids and their salts Compounds · REACH附錄十七 · Annex XVII to Regulation (EC) No 1907/2006			
						主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
						C9-C14 PFCA 相關物質」是指根據其分子結構，被認為可能會降解或轉化為 C9-C14 PFCAs 的物質。 The long-chain compounds can be degraded or transformed into C9-C14 PFCA precursors, which can be derived from PFOA	全部 All	物質、混合物或成品中。 -C9-C14 PFCAs及其鹽類之總和低於 25 ppb -C9-C14 PFCA 相關物質的總和低於 260 ppb。 Mixture, or the article is below 25 ppb for the sum of C9-C14 PFCAs and their salts or 260 ppb for the sum of C9-C14 PFCA-related substances	半導體用、滅火劑、防水劑、樹脂改性劑、離型劑、鐵氟龍前驅物(FEP,PTFE,PBT粉末)、含全氟烷基氧基的氟塑料和含氟彈性體 Semiconductor,extinguishing agent,water repellent, and plastic modifier 、Teflon(FEP,PTFE), perfluoroalkoxy-containing fluoroplastics and fluoroelastomers 註
						相關化學物質的代表性實例 Representative examples of relevant substance			
						全氟羧酸(C9-C14 PFCA) 及其鹽類化合物 Perfluorocarboxylic acids and their salts Compounds :			
						C9-PFCA 全氟壬酸 Perfluorononan-1-Oic Acid PFNA 375-95-1			
C10-PFCA 全氟癸酸 Nonadecafluorodecanoic Acid PFDA 335-76-2									
C11-PFCA 全氟十一烷酸 Henicosafluoroundecanoic Acid PFUnDA 2058-94-8									
C12-PFCA 全氟十二酸 Tricosfluorododecanoic Acid PFDoDA 307-55-1									
C13-PFCA 全氟十三酸 Pentacosfluorotridecanoic Acid PFTrDA 72629-94-8									
C14-PFCA 全氟十四酸 Heptacosfluorotetradecanoic Acid PFTDA 376-06-7									
註:參照ECHA公告官網 Note: For updates, please refer to the official website of ECHA announcement https://echa.europa.eu/substances-restricted-under-reach)									

	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
24	全氟己烷磺酸 (PFHxS) 及其鹽類以及PFHxS相關物質 Perfluorohexanesulphonic acid (PFHxS), its salts and PFHxS-related substances	持久性有機污染物POPs法規 (EU) POPs: Regulation (EU) 2019/1021	全部 All	- 混合物或成品中的PFHxS及其鹽類為 0.0000025wt% (25ppb) in a mixture or finished product PFHxS and its salts are 0.0000025wt% (25ppb) - 混合物或成品中的PFHxS相關物質總和為 0.0001wt% (1ppm, 1,000ppb) in a mixture or finished product The total amount of PFHxS related substances is 0.0001wt% (1ppm, 1,000ppb)	地毯、皮革、纖維、紙、鍍金、電子零部件 Carpets, leather, textile, paper, plating, electronic components
相關化學物質的代表性實例 Representative examples of relevant substance					
全氟己烷磺酸 (PFHxS) 及其鹽類和PFHxS相關物質 Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS related substances					CAS No.
全氟己烷磺酸 (PFHxS) Perfluorohexanesulphonic acid (PFHxS)					355-46-4
全氟己基磺酸 全氟己烷磺酸钠 Sodium perfluorohexanesulfonate					82382-12-5
全氟己基磺酸 全氟己烷磺酸鉀 Perfluorohexanesulfonic acid potassium salt					3871-99-6
全氟己基磺酸 全氟己烷磺酸鋰 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt					55120-77-9
全氟己基磺酸 全氟己烷磺酸銨 Ammonium perfluorohexane-1-sulfonate					68259-08-5
25	鹵素(溴和氯) Halogen free (Bromine and Chlorine)	- IEC61249-2-21 - JPCA-ES01 2003 - IPC 4101	全部 All	均質材料的 in homogeneous material Cl (900ppm) Br (900ppm) Cl+Br (1,500ppm)	用於塑膠中的塑化劑或阻燃劑，以及印刷電路板使用的 Plasticizers or retardants used in plastics and PCBs
26	多環芳香族碳氫化合物...續 Polycyclic - aromatic hydrocarbons (PAH) ...(continued)	REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	直接接觸，長時間接觸或是短時間內反覆接觸皮膚及口腔內部的橡膠及塑料零部件 Rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	零部件的 0.0001wt% by weight (1 ppm) of the part	橡膠，塑化劑，塑料的染色劑 Rubber, plasticizer, colored pigment for plastic
26	多環芳香族碳氫化合物 Polycyclic - aromatic hydrocarbons (PAH)	REACH規則(EC)No.1907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	包含遊樂設施在內的玩具及育嬰用品中，直接接觸，長時間接觸或是短時間內反覆接觸皮膚及口腔內部的橡膠及塑料零部件 Rubber or plastic components in toys, including activity toys, and childcare articles, that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	零部件的 0.00005% by weight (0.5 ppm) of the part	橡膠，塑化劑，塑料的染色劑 Rubber, plasticizer, colored pigment for plastic
相關化學物質的代表性實例 Representative examples of relevant substance					
多環芳香族碳氫化合物(PAH) Polycyclic-aromatic hydrocarbons (PAH)					CAS No.
苯並芘(BAP) Benzo[a]pyrene (BaP)					50-32-8
苯並(E)芘(BEP) Benzo[e]pyrene (BeP)					192-97-2
1,2-苯並蒽(BAA) Benzo[a]anthracene (BaA)					56-55-3
1,2-苯並菲(CHR) Chrysene (CHR)					218-01-9
苯並(B)熾(BbFA) Benzo[b]fluoranthene (BbFA)					205-99-2
苯並熾(BjFA) Benzo[j]fluoranthene (BjFA)					205-82-3
苯並[K]熾(BkFA) Benzo[k]fluoranthene (BkFA)					207-08-9
1,2 : 5,6-二苯並蒽(DBAaH) Dibenzo[a,h]anthracene (DBAaH)					53-70-3

	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use	
27	苯乙烯和2,4,4-三甲基戊烯的反应物 (BNST) Benzenamine,N-phenyl-,reaction products with strene and 2,4,4-trimethylpentene (BNST)	加拿大禁止特定有毒物质法规2012 Canada prohibits specific Toxic Substances Regulations, 2012	除下列豁免用途外的全部 All except for the following exemptions outside	有意添加(E8109-02) Intentionally	橡膠、潤滑油添加劑 Rubber, lubricant additives	
		相關化學物質的代表性實例 Representative examples of relevant substance				
		苯乙烯和2,4,4-三甲基戊烯的反应物 (BNST) Benzenamine,N-phenyl-,reaction products with strene and 2,4,4-trimethylpentene (BNST)				CAS No. 68921-45-9
		豁免用途: 除輪胎外的橡膠添加劑 (Exemptions)In addition to tire rubber additive				
28	六溴環十二烷 (HBCDD,HBCD)及其所有主要非對應異構體(續) Hexabromocyclo dodecane (HBCDD,HBCD) and all major diastereoisomers (continued....)	・ 與化學物質審查及生產等規制相關的法律(化審法) Japan Law concerning the evaluation of chemical substances ・ 持久性有機污染物POPs法規 (EU) 2019/1021 (2019年7月15日公布) POPs: Regulation (EU) 2019/1021 2019-07-15	全部 All	成形品中含有限制 0.0075wt% by weight of the Products(75ppm)	主要用作發泡聚苯乙烯和特定纖維的阻燃劑 Flame retardant mainly used for expanded polystyrene (PS), polyurethane (PU) and some types of fiber	
		・ 中國《關於持久性有機污染物的斯德哥爾摩公約》新增列六溴環十二烷(HBCDD)修正案》生效的公告》 China's "Stockholm Convention on Persistent Organic Pollutants" Newly Listed HBCD Amendment "Announcement on Entry into Force"	全部 All	有意添加(E8109-02) Intentionally	主要用作為阻燃劑・用於塑膠、發泡聚苯乙、聚苯乙烯 Mainly used as flame retardant, used in plastics, foamed polystyrene, polystyrene	
		相關化學物質的代表性實例 Representative examples of relevant substance				
		HBCDD及其所有主要非對應異構體 HBCDD and all Major Diastereoisomers				CAS No.
		六溴環十二烷(HBCDD) Hexabromocyclododecane (HBCDD)				25637-99-4 , 3194-55-6
		α-六溴環十二烷 α-hexabromocyclododecane				134237-50-6
		β-六溴環十二烷 β-hexabromocyclododecane				134237-51-7
		γ-六溴環十二烷 γ-hexabromocyclododecane				134237-52-8
		1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				4736-49-6
		1,2,5,6,9,10-六溴環十二烷-rel-(1R,2S,5R,6S,9S,10R)				65701-47-5
		1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				138257-17-7
		1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				138257-18-8
		1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				138257-19-9
		1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				169102-57-2
1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				678970-15-5		
1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				678970-16-6		
1,2,5,6,9,10-六溴環十二烷 -rel-(1R,2S,5R,6S,9R,10S)				678970-17-7		
29	鈹及其化合物 Beryllium (Be) and its compounds	相關化學物質的代表性實例 Representative examples of relevant substance				
		客戶要求Customer requirements 日本Ind-safety Law*2 Japan: Ind-safety Law*2 Sony SS-00259 歐盟電子電器廢棄物指令 European Union.WEEE Directive 2002/96/EC and EU Directive 1999/45/EC.	依用途 By purpose	.氧化鈹Beryllium oxide N.D.(M.D.L.=10ppm) .鈹(Be)及其化合物(除氧化鈹外) Beryllium and its compounds 產品中的均質材料: 0.1 wt% (1000 ppm) of product	電子元件的陶瓷 鈹銅的电气性结合用途 (连接器、彈簧、EMI 填充片等) Connector contacts, EMI finger (beryllium-copper alloys), transceivers (beryllium oxide)	
		相關化學物質的代表性實例 Representative examples of relevant substance				
		鈹及其化合物 Beryllium (Be) and its compounds				CAS No.
		氧化鈹 Beryllium oxide		1304-56-9		
		鈹 Beryllium		7440-41-7		

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use	
30	2-(2'-羥基-3',5'-二-叔-戊基苯基)苯並三唑(UV-328) (2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328))	• 持久性有機污染物POPs法規 (EU) 2019/1021 POPs: Regulation (EU) 2019/1021	全部 All	有意添加(E8109-02) Intentionally	紫外線吸收劑 偏光板、防反射膜 全像標籤 Ultraviolet absorber, polarizer, anti-reflection film, hologram label	
					相關化學物質的代表性實例 Representative examples of relevant substance	
					化學物質名稱 Substance name	CAS No.
					2-(2'-羥基-3',5'-二-叔-戊基苯基)苯並三唑(UV-328) 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol (UV-328)	25973-55-1
31	得克隆 (Dechlorane Plus)	• 持久性有機污染物POPs法規 (EU) 2019/1021 POPs: Regulation (EU) 2019/1021 • 加拿大有毒物質法規的追加候補物質 Additional candidate substances to the Canada prohibition of Certain Toxic Substances Regulations	全部 All	有意添加(E8109-02) Intentionally	黏接劑、密封劑 阻燃劑、 電工絕緣膠帶 Adhesive, sealant, fame retardant, electrical insulation tape	
					相關化學物質的代表性實例 Representative examples of relevant substance	
					化學物質名稱 Substance name	CAS No.
					易來灰 DK-15 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene	13560-89-9
					DECHLORANE PLUS ANTI (1S,2S,5S,6S,9R,10R,13R,14R)-1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca- 7,15-diene	135821-74-8
					DECHLORANE PLUS SYN (1S,2S,5R,6R,9S,10S,13R,14R)-1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene	135821-03-3

1.2.2 電池中的禁止含有化學物質 Prohibited Chemical Substances in Batteries

針對電池方面，以世界主要法令為基準，與“1.2.1產品禁止含有化學物質”有所區別，針對下述3種重金屬加以限制。

1.2.1, Prohibited Chemical Substances in Products.”

Especially for batteries, use of three heavy metals shall be prohibited as shown in the following table based on the world's key regulations, separately from Section 1.2.1, Prohibited Chemical Substances in Products.”

物質 Substance	作為禁止對象的電池 Prohibited battery	最大濃度值 Threshold Level	法律法規依據 Corresponding regulation
鎘 Cadmium	· 錳電池 · 碱電池 · 鎳氫蓄電池 （鈕扣電池除外） Zinc – carbon batteries, alkaline manganese batteries, and nickel – metal hydride (Ni-MH) secondary batteries (except Button cells)	電池中鎘的濃度為0.001wt%（10ppm） 0.001% by weight (10ppm)of cadmium in a battery	· EU電池規則（EU）2023/1542 · EU Batteries Regulation (EU)2023/1542 · 韓國《電器用品及生活用品安全管理法》 · Korea “Quality Management and Industrial Products Safety Management Enforcement Ordinances” · 台灣廢棄物清理法（重金屬規定） · Taiwan Waste Disposal Act(Regulation on heavy metal)
	上述以外的電池 (包括緊急燈在內的緊急報警系統，醫療器械) Batteries, other than the batteries listed above (except for emergency and alarm systems, including emergency lighting, and medical equipment)	電池中鎘的濃度為0.002wt%（20ppm） 0.002% by weight (20ppm) of cadmium in a battery	
鉛 Lead	碱錳電池 Alkaline manganese batteries	電池中鉛為0.004wt%(40ppm) 0.004% by weight (40ppm) of lead in a battery	· EU電池規則（EU）2023/1542 · EU Batteries Regulation (EU)2023/1542 · 巴西電池限制國家環境審議會第401號決議 · Brazilian Batteries Regulation National Environmental Council Resolution 401 · 中國《電池中有害物質限量》（GB24427-2021） · Chinese National Standards regarding the limit of hazardous substances in batteries (GB24427-2021) · 韓國《電器用品及生活用品安全管理法》 · Korea “Quality Management and Industrial Products Safety Management Enforcement Ordinances”
	鋅空氣鈕扣電池 Zinc air button cells	電池中鉛為0.05wt%(500ppm) 0.05% by weight (500ppm) of lead in a battery	
	上述以外的電池 Batteries, other than the batteries listed above	電池中鉛為0.01wt%(100ppm) 0.01% by weight (100ppm) of lead in a battery	
汞 Mercury	· 錳電池 · Zinc-carbon batteries · 碱錳電池 · Alkaline manganese batteries	· 有意添加 · Intentionally added · 電池中汞為0.0001wt%(1ppm) · 0.0001% by weight (1ppm) of mercury in a battery · 均質材料中汞為0.0005wt%(5ppm) · 0.0005% by weight (5ppm) of mercury in homogeneous material	· EU電池規則（EU）2023/1542 · EU Batteries Regulation (EU)2023/1542 · 美國汞含有及蓄電池管理法（MRBM） · USA Federal Mercury-Containing and Rechargeable Battery Management Act (MRBM) · 加拿大含汞產品法規SOR/2014-254 · Canada Products containing Mercury Regulations SOR/2014-254 · 中國《電池中有害物質限量》（GB24427-2021） · Chinese National Standards regarding the limit of hazardous substances in batteries (GB24427-2021) · 韓國《電器用品及生活用品安全管理法》 · Korea “Quality Management and Industrial Products Safety Management Enforcement Ordinances” · 台灣廢棄物清理法（重金屬規定） · Taiwan Waste Disposal Act (Regulation on heavy metal)
	鎳氫蓄電池（鈕扣電池除外） Nickel-metal hydride (Ni-MH) secondary batteries (except Button cells)	· 電池中汞為0.0001wt%(1ppm) · 0.0001% by weight (1ppm) of mercury in a battery · 均質材料中汞為0.0005wt%(5ppm) · 0.0005% by weight (5ppm) of mercury in homogeneous material	
	上述以外的電池 Batteries, other than the batteries listed above	均質材料中汞為0.0005wt%(5ppm) 0.0005% by weight (5ppm) of mercury in homogeneous material	
高氯酸鹽 Perchlorates	全部 All	產品的0.0000006wt%(0.006ppm) 0.0000006% by weight (0.006 ppm) of the product	· 美國加利福尼亞州 · US/ California Perchlorate Contamination · 高氯酸鹽污染防治法2003 · Prevention Act of 2003
相關化學物質的代表性實例 Representative examples of relevant substance			
化學物質名稱 Substance name			CAS No.
高氯酸鋰 Lithium perchlorate			7791-03-9

1.2.3 光學材料中的禁止含有化學物質

Prohibited Chemical Substances in Optical Materials

針對光學玻璃、濾光玻璃等光學材料，含有化學物質按照下述規則加以限制。
Especially for optical materials, such as optical glass and filter glass, use of chemical substances shall be prohibited as shown in the following table.

光學材料種類 Type of optical glass	限制內容 Detail of regulation
光學玻璃及濾光玻璃 Optical glass and filter glass	適用於“1.2.1產品禁止含有化學物質”，且將砷作為禁止含有化學物質，視其最大濃度值為有意添加。 The regulations described in Section 1.2.1, “Prohibited chemical Substances in Products”, shall be applied. In addition, arsenic shall be a prohibited chemical substance and its threshold shall be “intentionally added”. (註) 鎘、鉛、砷不適用於資料1和資料2中的RoHS指令的豁免用途。但是，由於材料技術的原因，無替代材料且為保證光學性能，在設計時必不可少的情況下允許添加。 Note: Applications exempted from the RoHS Directive described in Annex 1 and Annex 2 do not apply to cadmium, lead, and arsenic. However, the use of cadmium, lead, and arsenic is conditionally permitted when their substitutions are not available currently because of material technology and they are technically and scientifically essential to maintain the optical performance required in product designing.
將其他光學材料 (光學樹脂、光學晶體及其他) Other optical materials(optical plastic, optical crystal, etc.)	視為適用於“1.2.1產品禁止含有化學物質”之物質。 The regulations described in Section 1.2.1, “Prohibited chemical substances in products,” shall be applied.

1.3 RoHS指令豁免項目 附錄三

Applications exempted from the RoHS Directive Annex III

RoHS指令(2011/65/EU) 限制產品類別為附錄一 (Annex I) 電氣和電子設備EEE類，豁免依種類與用途進行分類，分為附錄三與附錄六。豁免項目異動與期限展延之結果，以歐盟委員會 (EUCLEF)擬定之歐盟公報(簡稱OJ),為最終公告。

歐盟官網：https://echa.europa.eu/exemptions-art-4-restrictions-rohs *ROHS- Exemptions from Article 4(1) Restrictions, Annexes III & IV)

資料來源：本次修訂附錄三資訊收集回溯2022年3月3日前，源自歐盟委外諮詢機構之豁免評估報告，此報告常為歐盟委員會決議豁免項目主要參詳。

資料說明：委外機構Oeko-Institut 公布鉛豁免評估報告:RoHS Pack 22⁽¹⁾與 Pack 24⁽²⁾ 及歐盟公報(汞豁免)。

*查閱豁免時，需掌握產品資訊，若發現產品原物料含有超規物質時，也需考量客戶法規與各獨立法規之相容適用性。

1.3 Applications exempted from the RoHS Directive Annex III

The RoHS Directive (2011/65/EU) restricts the product category to Annex I (Annex I) electrical and electronic equipment EEE category. Exemptions are classified according to types and uses, and are divided into Appendix III and Appendix VI. The results of the changes and extension of the exempted projects will be finalized in the European Union Official Journal (OJ) prepared by the European Commission (EUCLEF).

EU official website : https://echa.europa.eu/exemptions-art-4-restrictions-rohs *ROHS- Exemptions from Article 4(1) Restrictions, Annexes III & IV)

Data source: The information collection in Appendix III of this revision goes back to March 3, 2022, and comes from the exemption assessment report of the European Commission's external advisory body. This report is often the main reference for the EU Commission's decision exemption project.

Description : Outsourced agency Oeko-Institut has published lead exemption assessment reports: RoHS Pack 22⁽¹⁾ and Pack 24⁽²⁾ and the Official Journal of the European Union (Mercury Exemption).

*When checking the exemption, you need to master the product information. If you find that the raw materials of the product contain excessive substances, you also need to consider the compatibility and applicability of customer regulations and independent regulations.

1.3 附錄三豁免項目區分範圍 Appendix III Scope of Exemption Items

類別編號 Item	附錄一：電氣和電子設備 EEE產品類別 Appendix 1: Electrical and Electronic Equipment EEE Product Category
1	大型家電 (Large household appliance)
2	小型家電 (Small household appliances)
3	資訊及電信設備 (IT and telecommunications equipment)
4	消費類設備 (Consumer equipment)
5	照明設備 (Lighting equipment)
6	電機電子設備 (不包括大型固定工業工具設備) Electrical and electronic equipment (excluding large stationary industrial tools and equipment)
7	玩具、休閒和運動設備 (Toys, leisure and sports equipment)
8	醫療設備（不包括所有植入和受感染產品） Medical devices (excluding all implanted and infected products)
9	監測和控制設備,包括工業監測及控制設備 Monitoring and control instruments including industrial monitoring and control instruments
10	自動販賣投放器 (Automatic dispensers)
11	上述範圍未包含之其他電子電機設備 (Other EEE not covered by any of the categories above)。
除外對象: RoHS 2指令第2(4)條定義之維持歐盟安全所需的軍用設備、專供外太空使用的設備、大型固定工業器具及固定裝置、客貨運輸工具(非核准型號的兩輪電動車除外)、專業用非道路移動機械、有源植入式醫療設備、太陽能光伏板，及企業對企業提供且專門設計用於研發的電器及電子設備。 Excluded objects: military equipment required to maintain EU security as defined in Article 2(4) of the RoHS 2 Directive, equipment dedicated to outer space, large fixed industrial appliances and fixtures, passenger and cargo transportation vehicles (two wheels of non-approved models) excluding electric vehicles), non-road mobile machinery for professional use, active implantable medical devices, solar photovoltaic panels, and electrical and electronic equipment supplied by business to business and specially designed for research and development.	

No.	豁免清單 Exemption	豁免期限 (註1、2、3) Expiration date		
		類別Category 1-7、10	類別Category 8、9、11	
1	單端省電燈管中所使用的汞含量不得超過(每個燈): Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):			
1(a) (Hg)	一般照明用途 < 30 W : 2.5 毫克 (mg) For general lighting purposes < 30 W: 2.5 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
1(b) (Hg)	一般照明用途 ≥ 30 W 且 < 50 W : 3.5 毫克 (mg) For general lighting purposes ≥ 30 W and < 50 W: 3.5 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
1(c) (Hg)	一般照明用途 ≥ 50 W 且 < 150 W : 5 毫克 (mg) For general lighting purposes ≥ 50 W and < 150 W: 5 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
1(d) (Hg)	一般照明用途 ≥150W:15毫克(mg) For general lighting purposes ≥ 150 W: 15 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
1(e) (Hg)	一般照明用途, 為圓形或方形結構, 且管徑≤17mm:7毫克(mg) For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
1(f-I) (Hg)	主要發射紫外光譜的燈 : 5 mg For lamps designed to emit mainly light in the ultraviolet spectrum: 5 mg	到期日: 2027 / 2 / 24 Expires on 2027/2/24		
1(f-II) (Hg)	特殊用途:5mg For special purposes: 5 mg	到期日: 2025 / 2 / 24 Expires on 2025/2/24		
1(g) (Hg)	一般照明用途<30W, 壽命≥20000h : 3.5毫克(mg) For general lighting purposes<30 W , Lifetime≥20000h : 3.5 mg	到期日: 2023 / 8 / 24 Expires on 2023/8/24		
2(a) (Hg)	用於一般照明之雙端直線型省電燈管中, 所使用的汞含量不得超過 (每個燈管): Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):			
2(a)(1) (Hg)	一般壽命之三波長螢光燈, 其管徑 < 9 mm (例如 T2) : 4 mg Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 4 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
2(a)(2) (Hg)	一般壽命之三波長螢光燈, 其管徑 ≥ 9 mm 且 ≤ 17 mm (例如T5) : 3 mg Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 3 mg	到期日: 2023 / 8 / 24 Expires on 2023/8/24		
2(a)(3) (Hg)	一般壽命之三波長螢光燈, 其管徑 > 17 mm 且 ≤ 28 mm (例如T8) : 3.5 mg Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 3.5 mg	到期日: 2023 / 8 / 24 Expires on 2023/8/24		
2(a)(4) (Hg)	一般壽命之三波長螢光燈, 其管徑 > 28 mm (例如T12) : 3.5mg Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 3.5 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
2(a)(5) (Hg)	長壽命(≥ 25 000 h) 之三波長螢光燈 : 5 mg Tri-band phosphor with long lifetime (≥ 25 000 h): 5 mg	到期日: 2023 / 2 / 24 Expires on 2023/2/24		
2(b) (Hg)	用於其他螢光燈管中, 所使用的汞含量不得超過(每個燈管): Mercury in other fluorescent lamps not exceeding (per lamp):			
2(b)(3) (Hg)	非直線型三波長螢光燈, 其管徑 > 17 mm (例如T9): 15mg Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9): 15 mg	到期日 Expires on: 2023 / 2 / 24 : 15mg 2023/2/25 ~ 2025/2/24 : <10 mg		
2(b)(4-I) (Hg)	其他普通照明用及特殊用途 (例 感應燈): 15mg Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg	到期日: 2025/2/24 Expires on 2025 / 2 / 24		
2(b)(4-II) (Hg)	主要於發射紫外光譜的燈 : 15 mg Lamps emitting mainly light in the ultraviolet spectrum: 15 mg	到期日: 2027/2/24 Expires on 2027 / 2 / 24		
2(b)(4-III) (Hg)	緊急照明燈 : 15 mg Emergency lamps: 15 mg	到期日: 2027/2/24 Expires on 2027 / 2 / 24		
3 (Hg)	特殊用途之冷陰極螢光燈及外部電極螢光燈(CCFL 和 EEFL) 用於 2022年2月24 日之前投放市場的 EEE中所使用的汞含量不得超過 (每個燈管) Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes used in EEE placed on the market before 24 February 2022 not exceeding (per lamp)			
3(a) (Hg)	較短長度 (≤ 500 mm): 3.5mg Short length (≤ 500 mm) :3.5mg	到期日: 2025/2/24 Expires on 2025 / 2 / 24		
3(b) (Hg)	中等長度 (> 500 mm and ≤ 1 500 mm): 5mg Medium length (> 500 mm and ≤ 1 500 mm) :5mg			
3(c) (Hg)	長管燈 (> 1,500mm) : 13mg Long length (> 1 500 mm) :13mg			
4(a) (Hg)	其他低壓放電燈 (每個燈管) : 15mg Mercury in other low pressure discharge lamps(per lamp) :15mg	到期日: 2023/2/24 Expires on 2023 / 2 / 24		
4(a)-I (Hg)	低壓無磷塗層放電燈中的汞, 該應用要求燈光譜輸出的主要範圍在紫外光譜內: 每個燈最多可使用 15 mg 汞 Mercury in low pressure non-phosphor coated discharge lamps, where the application requires the main range of the lamp-	到期日: 2027/2/24 Expires on 2027 / 2 / 24		
4(b) (Hg)	一般照明用途之高壓鈉(蒸氣) 燈, 其演色性指數 Ra > 60, 所使用的汞含量不得超過 (每個燈) Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60	到期日: 2027/2/24 Expires on 2027 / 2 / 24		
4(b)-I (Hg)	一般照明用途高壓鈉(蒸氣)燈, 其改進的演色性指數Ra > 60, P ≤ 155 W, 所使用的汞含量不得超過 (每個燈): 30 mg P (燈管功率) ≤155W : 30mg Ra > 60, P ≤ 155 W: 30mg	到期日: 2023/2/24 Expires on 2023 / 2 / 24		
4(b)-II (Hg)	Ra > 60, 155W<P≤405W : 40mg			
4(b)-III (Hg)	Ra > 60, P>405W : 40mg			

No.	豁免清單 Exemption	豁免期限（注1、2、3） Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
4(c) (Hg)	一般照明用途之高壓鈉(蒸氣)燈，所使用的汞含量不得超過(每個燈): Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner)		
4(c)-I (Hg)	P（灯管功率）≤155 W：20mg P ≤ 155 W: 20mg	到期日:2027/2/24 Expires on 2027 / 2 /24	
4(c)-II (Hg)	155W < P ≤405 W：25mg		
4(c)-III (Hg)	P>405W：25mg		
4(e) (Hg)	金屬鹵化燈 (MH) 中所含的汞 Mercury in metal halide lamps (MH)	到期日:2027/2/24 Expires on 2027 / 2 /24	
4(f)-I (Hg)	其他未在此附錄中所提及之特殊用途放電燈所含之汞 Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	到期日:2025/2/24 Expires on 2025 / 2 /24	
4(f)-II (Hg)	要求輸出 ≥ 2000 流明 ANSI 的投影機中使用的高壓汞蒸氣燈中的汞 Mercury in high pressure mercury vapour lamps used in projectors where an output ≥ 2000 lumen ANSI is required	到期日:2027/2/24 Expires on 2027 / 2 /24	
4(f)-III (Hg)	園藝照明用的高壓鈉蒸氣燈中的汞 Mercury in high pressure sodium vapour lamps used for horticulture lighting		
4(f)-IV (Hg)	發出紫外光譜燈中的汞 Mercury in lamps emitting light in the ultraviolet spectrum		
5(a) (Pb)	陰極射線管中的玻璃可含鉛 Lead in glass of cathode ray tubes	到期日:2016/7/21 Expires on 2016/7/21	到期日Expires on : 2021/ 7/21 : 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE
5(b) (Pb)	用於螢光燈玻璃管的鈉石灰玻璃中的鉛(非故意添加的)，重量不超過0.2%(wt) Lead in glass of fluorescent tubes not exceeding 0,2 % by Weight	到期日 : 2024/12/31 Expires on: 2024/12/31 : Cat 5 -RoHS Pack 24 ^(*) recommendations	到期日Expires on : 2021/ 7/21 : 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE
6(a) (Pb)	鉛用於加工用途之鋼材及鍍鋅鋼的合金元素之一，含量不超過0.35%(wt)（按重量計） Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	12 months after the directive takes effect	12 months after the directive takes effect
6(a)-I&II(Pb)	鉛用於加工用途之鋼材，含量最高可達0.35%(wt) 在用於批量熱浸鍍鋅鋼材，含鉛量最高可達0.2%(wt) Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight Lead in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	到期日Expires : 2026 /12/31 全類別 All categories	
6(b) (Pb)	鉛用於鋁合金，並為其元素之一，含量最高可達0.4% (wt) Lead as an alloying element in aluminium containing up to 0,4 % lead by weight 2019.6.30 轉到Shifted to 6(b)-I、6(b)-II)	12 months after the directive takes effect	12 months after the directive takes effect
6(b)-I (Pb)	來源為回收含鉛鋁廢料時，其鉛含量最高可達0.4%(wt) Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	12 months after the directive takes effect	到期日Expires on : 2026/12/31 : 8 體外除外 8 other than in vitro 2026/12/31 : 9 industrial ,11 other EEE
6(b)-II(Pb)	鉛用於加工用途之鋁合金，含量最高可達0.4%(wt) Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	12 months after the directive takes effect	到期日Expires on : 2026/12/31 : 8 體外除外 8 other than in vitro 2026/12/31 : 9 industrial ,11 other EEE

No.	豁免清單 Exemption	豁免期限 (注1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
6(b)-III(Pb)	鉛作為鋁合金鑄造合金(aluminium casting alloys)中的合金元素，鉛含量高達0.3%(鉛源自於回收鉛鋁廢料) Lead as an alloying element in aluminium casting alloys with a lead content of up to 0.3% (lead is derived from recycled lead aluminium scrap)	到期日Expires on : 2026/12/31 10 除外 10 other than 2026/12/31 : 1-7	到期日Expires on : 2026/12/31 9 工業除外 9 other than 2026/12/31 : 8 in vitro 11 other EEE
6(c) (Pb)	銅合金所含的鉛，最高可達4%(wt) Copper alloy containing up to 4 % lead by weight	到期日Expires : 2026/12/31 全類別 All categories	
7(a) (Pb)	高熔點鉕錫的鉛(如鉛為基底的合金，其鉛含量大於85%) (不含附錄III 第24 項的應用) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead) (excludes those in the scope of exemption 24)	到期日Expires on : 2026/12/31 (不含附錄III 第24 項的應用) (except applications covered by point 24 of this Annex)	
	高熔點鉕錫的鉛(如鉛為基底的合金，其鉛含量大於85%) (不含附錄III 第24 項的應用)： I) 在半導體組件中連接芯片或其他組件以及具有 0.1 A 或更大的穩態或瞬態/脈衝電流或超過 10 V 的阻斷電壓或大於 0.3 mm x 0.3 mm 的芯片邊緣尺寸的芯片的內部互連 II) 用於電氣和電子元件中芯片連接的整體 (意味著內部和外部) 連接，如果固化/燒結的芯片連接材料的熱導率 >35W/(m*K) 並且固化/燒結的芯片連接材料的電導率 >4.7MS/m 並且固相線熔化溫度必須高於 260 °C III) 用於製造元件的第一級焊點 (內部或整體連接 - 意味著內部和外部) 中，以便隨後將電子元件安裝到子組件 (即模塊或子電路板或基板或點對點焊接) 上焊料不會回流第一級焊料。此項目不包括芯片連接應用和氣密密封 IV) 用於將元件連接到印刷電路板或引線框架的二級焊點中： 1. 用於連接陶瓷球柵陣列 (BGA) 的焊料 2. 在高溫塑料包覆成型 (> 220 °C) V) 作為氣密密封材料： 1. 陶瓷封裝或插頭和金屬外殼， 2. 組件終端和內部子部分 VI) 用於紅外線加熱或高強度放電燈或烤箱燈的白熾反射燈中的燈組件之間建立電氣連接 VII) 用於峰值工作溫度超過 200°C 的音頻傳感器 Lead in high melting temperature type solders (i.e., lead-based alloys containing 85 % by weight or more lead) when used for the following applications (excludes those in the scope of exemption 24): I) for internal interconnections for attaching die, or other components along with a die in semiconductor assembly with steady state or transient/impulse currents of 0.1 A or greater or blocking voltages beyond 10 V, or die edge sizes larger than 0.3 mm x 0.3 mm II) for integral (meaning internal and external) connections of die attach in electrical and electronic components, if the thermal conductivity of the cured/sintered die-attach material is >35W/(m*K) AND the electrical conductivity of the cured/sintered die-attach material shall be >4.7MS/m AND solidus melting temperature has to be above 260 °C III) In first level solder joints (internal or integral connections - meaning internal and external) for manufacturing components so that subsequent mounting of electronic components onto subassemblies (i.e., modules or sub-circuit boards or substrates or point to point soldering) with a secondary solder does not reflow the first level solder. This item excludes die attach applications and hermetic sealings IV) In second level solder joints for the attachment of components to printed circuit board or lead frames: 1. in solder balls for the attachment of ceramic ball-grid-array (BGA) 2. in high temperature plastic overmouldings (> 220 °C) V) as a hermetic sealing material between: 1. a ceramic package or plug and a metal case, 2. component terminations and an internal sub-part VI) for establishing electrical connections between lamp components in incandescent reflector lamps for infrared heating or high intensity discharge lamps or oven lamps VII) for audio transducers where the peak operating temperature exceeds 200°C	到期日Expires on : 2027/12/31 (不含附錄III 第24 項的應用) (except applications covered by point 24 of this Annex)	
7(b) (Pb)	於伺服器、儲存裝置或儲存陣列系統裝置中使用的鉕錫，或於架設網路設備中用到的如開關、信號裝置、傳輸裝置或電信網路設備中所會用到的鉕錫可含鉛。 Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	屆期Expired Expires on 2016/7/21	
7(c)-I (Pb)	鉛用於電器及電子元件中之玻璃或陶瓷 (介電陶瓷電容除外)，例如：壓電器件(piezoelectronic devices)或玻璃或陶瓷基複合材料。 Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	到期日Expires on : 2026/12/31 全類別All categories	
7(c)-II (Pb)	額定電壓為125 V AC or 250 V DC 或者更高之介電陶瓷電容中所含的鉛 Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher 註:不適用本附錄第7(c) I 與 7(c) IV 的應用。 Note: Does not apply to applications covered by point 7(c)-I and 7(c)-IV of this Annex.	到期日Expires on : 2027/12/31 全類別All categories	
7(c)-III (Pb)	額定電壓低於125 V AC or 250 V DC 的介電陶瓷電容中所含的鉛 Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	屆期Expired 2013/01/01	

No.	豁免清單 Exemption	豁免期限 (註1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
7(c)-IV (Pb)	含鉛陶瓷的電氣和電子元件，例如: PZT陶瓷、PTC陶瓷等，不包括7(c)-II、7(c)-III和7(c)-IV所列項目 Electrical and electronic components containing lead in a ceramic that fulfils the following functions (excluding items covered under item 7(c)-II, 7(c)-III and 7(c)-IV of this annex): 1) piezoelectric lead zirconium titanate (PZT) ceramics 2) providing ceramics with a positive temperature coefficient (PTC)	屆期Expired Expires on 2021/7/21 -RoHS Pack 22 ⁽¹⁾ recommendations	到期日Expires on : 2021/ 7/21 : 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE -RoHS Pack 22 ⁽¹⁾ recommendations
7(c)-V (Pb)	含鉛之玻璃或玻璃基質化合物的電器和電子元件，並滿足以下任何一種功能： 1) 用於高壓二極體玻璃珠和以鉛鋅硼酸鹽或鉛矽硼酸鹽玻璃體為基礎的晶片玻璃層的保護和電絕緣 2) 用於陶瓷、金屬和/或玻璃部件之間的密封； 3) 用於製程參數(process parameter window) < 500 °C 的黏合目的，結合黏度 1013.3 dPas(「玻璃化轉變溫度」) 4) 用作油墨等電阻材料，電阻率範圍為1歐姆/平方至1兆歐姆/平方，不含微調電位器(trimmer potentiometers) 5) 用於微通道板(MCP)、通道電子倍增器(CEM)和電阻玻璃產品(RGP)的化學改質玻璃表面。 Electrical appliances containing lead in glass or glass matrix compounds and Electronic components that meet any of the following functions: 1) Used for high voltage diode glass beads and lead-zinc-boron Silicate or lead borosilicate glass based wafers Protection and electrical insulation of the glass layer; 2) For use between ceramic, metal and/or glass components Sealing; 3) For process parameters window) < 500 °C for bonding purposes,Viscosity 1013.3 dPas ("glass transition temperature"); 4) Used as resistive materials such as ink, with a resistivity range of 1 ohm/square to 1 megohm/square, excluding micro trimmer potentiometers; 5) Used for microchannel plates (MCP) and channel electron multiplication Chemical Emission Modules (CEM) and Resistive Glass Products (RGP) Modified glass surface.	到期日Expires : 2027 /12/31 全類別 All categories	
7(c)-VI (Pb)	符合下列任一功能的陶瓷中含有鉛的電器和電子元件(不包括本附件第7(c)-II、7(c)-III和7(c)-IV項以及附件四第14項)： 1) 用於鈦酸鉛(PZT)壓電陶瓷； 2) 用於提供具有正溫度係數(PTC)的陶瓷。 Electrical and electronic components containing lead in ceramics (excluding items 7(c)-II, 7(c)-III and 7(c)-IV of this Annex and item 14 of Annex IV) that meet any of the following functions: 1) Used for lead zirconate titanate (PZT) piezoelectric ceramics; 2) Used to provide ceramics with a positive temperature coefficient (PTC).	到期日Expires : 2027 /12/31 全類別 All categories (不含附件第7(c)-II、7(c)-III和7(c)-IV項以及附件四第14項) (Excluding items 7(c)-II, 7(c)-III and 7(c)-IV of the Annex and item 14 of Annex IV)	
8(a) (Cd)	鎘及鎘化合物可用於溫度保險絲中。 Cadmium and its compounds in one shot pellet type thermal cut-offs	屆期Expired 2012/01/01	
8(b) (Cd)	用於電子接點中的鎘及鎘化合物 Cadmium and its compounds in electrical contacts	2020.2.29 移至8(b)-1 (Shifted to 8(b)-I)	到期日Expires on : 2021/7/21 (商討中) 8 and 9體外和工業除外 8and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE
8(b)-I (Cd)	以下電子接點中的鎘及鎘化合物 - 斷路器 - 熱感控制器 - 熱電機保護器 (不包括密封熱電機保護器) - 交流電250V以上及額定電流6A以上，或交流電125V以上及額定電流12A以上的交流開關 - 直流電18V以上及額定電流20A以上的直流開關 - 電源頻率≥200Hz時使用的開關 Cadmium and its compounds in electrical contacts used in: - circuit breakers, - thermal sensing controls, - thermal motor protectors (excluding hermetic thermal motor protectors) - AC switches rated at: - 6 A and more at 250 V AC and more, or - 12 A and more at 125 V AC and more, - DC switches rated at 20 A and more at 18 V DC and more, and - switches for use at voltage supply frequency ≥ 200 Hz.	到期日Expires on : 2021/ 7/21 -Pack 23	

No.	豁免清單 Exemption	豁免期限 (注1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
9(a)-I(Cr6+)	正常運行狀態下，平均功耗小于75W的具有完全或部分設計的電加熱器的吸收式冰箱（包括迷你式）的碳鋼冷却系統中所用作防腐劑，所用量不超过0.75%的六價鉻 Up to 0,75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators (including minibars) designed to operate fully or partly with electrical heater, having an average utilised power input < 75 W at constant running conditions	到期日:2021/3/5 Expires on 2021/3/5	
9(a)-II (Cr6+)	作為吸收式冷動機的碳鋼冷却系統中所用作防腐劑，所用量不超过0.75%的六價鉻 正常運行狀態下,平均功耗大于75W的具有完全或部分設計的電加熱器 被設計為無電加熱，可完全工作的設備。 agent in the cooling solution of carbon steel cooling systems of absorption refrigerators: —designed to operate fully or partly with electrical heater, having an average utilised power input ≥ 75 W at constant running conditions,—designed to fully operate with non-electrical heater.	到期日: 2021/ 7/21 Expires on : 2021/ 7/21 - Pack 23 recommendations	
9(a)-III (Cr6+)	六價鉻作為空間和水加熱的氣體吸收式熱泵碳鋼密封迴路工作流體的防腐劑，其重量不超过冷卻溶液0.7% Hexavalent chromium as an anti-corrosion agent for working fluids in gas-absorption heat pumps for space and water heating, carbon steel sealed circuits, up to 0.7% by weight of the cooling solution	到期日:2026/12/31 Expires on 2026/12/31 適用於第1類 for class 1	
9(b) (Pb)	使用於暖氣、通風、空調和冰箱(HVACR)應用的壓縮機軸承殼和襯套中的鉛 Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	屆期Expired 2018/7/5	到期日: 2021/ 7/21 Expires on : 2021/ 7/21 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE
11(a) (Pb)	C-press 順應針(compliant pin) 連接器系統中的應用可含鉛。 Lead used in C-press compliant pin connector systems	屆期Expired 2010/9/24	
11(b) (Pb)	除了C-press 之外的順應針(compliant pin)連接器系統中所使用的鉛。 Lead used in other than C-press compliant pin connector systems	屆期Expired 2013/1/1	
12 (Pb)	導熱模組 C-ring 中的塗布材質可含鉛。 Lead as a coating material for the thermal conduction module C-ring	屆期Expired 2010/9/24	
13(a) (Pb)	光學應用之白玻璃中的鉛 Lead in white glasses used for optical applications	2021.7.21 延長申請中 Requested renewal	到期日 Expires on : 2023/7/21 : 8 2024/7/21 : 9 ,11
13(b) (Pb) (Cd)	濾光玻璃及用來當作反射率標準片的玻璃中的鎘與鉛 Cadmium and lead in filter glasses and glasses used for reflectance standards	屆期 Expired	到期日 Expires on : 2021/ 7/21(商討中) 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 in vitro 2024/7/21 : 9 industrial ,11 other EEE
13(b)-I (Pb)	用於離子色濾光玻璃(ion coloured optical filter glass)類型中的鉛。 Lead in ion coloured optical filter glass types	2021.7.21 延長申請中 Requested renewal	
13(b)-II(Cd)	用於鐳射濾光玻璃(striking optical filter glass)類型中的鎘，不包括Annex III第39點。 Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	2021.7.21 延長申請中 Requested renewal	
13(b)-III (Pb) (Cd)	用於反射率標準釉料中的鉛和鎘。 Cadmium and lead in glazes used for reflectance standards	2021.7.21 延長申請中 Requested renewal	
14 (Pb)	用於連接接腳及封裝後的微處理器的鋅錫，若此鋅錫為兩種以上之元素組成，則其含鉛量可介於 80%~85% 之間。 Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight	屆期Expired 2011/1/1	
15 (Pb)	用於積體電路覆晶封裝流程中，為連接半導體晶片及載體間，以完成電力連結的鋅錫可含鉛。 Electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	2020.2.29 移至15(a)-I (Shifted to 15(a)-I)	到期日 Expires on : 2021/ 7/21(商討中) 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023 /7/21 : 8 2024 /7/21 : 9 ,11 EEE

No.	豁免清單 Exemption	豁免期限 (注1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
15(a)-I (Pb)	用於積體電路覆晶封裝流程中，為連接半導體晶片及載體間，以完成電力連結的錫鉛可含鉛。 - 大於或等於 90nm 半導體技術製程。 - 單個晶圓尺寸大於或等於 300 mm ² 的半導體技術製程。 - 以大於或等於 300 mm ² 的晶圓堆疊封裝 (stacked diepackages) 或大於或等於 300 mm ² 的矽載板 (silicon interposers)。 Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: - a semiconductor technology node of 90 nm or larger; - a single die of 300 mm ² or larger in any semiconductor technology node; - stacked die packages with die of 300 mm ² or larger, or silicon interposers of 300 mm ² or larger.	2021.7.21 延長申請中 Requested renewal	
16 (Pb)	直立式的鎢絲燈，若其燈管含有矽酸鹽塗佈，則可含鉛。 Lead in linear incandescent lamps with silicate coated tubes	到期日:2013/9/1 Expires on 2013/9/1	
17 (Pb)	鹵化鉛作為發光源，並用於專業複印設備的HID燈中，則可含鉛。 Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	到期日:2016/7/21 Expires on 2016/7/21	到期日Expires on : 2021/7/21 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21 : 9 ,11 EEE
18(b) (Pb)	當放電燈，其中含有磷，例如BSP (BaSi2O5:Pb) Pb，則放電燈中的螢光粉，其鉛作為觸發源，鉛含量可佔 1% 或更少。 Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi2O5:Pb)	到期日Expires on : 2026/7/21: Cat 5 ,8,9 2023/7/21 : 第8類體外診斷醫療器械 Cat 8 in vitro diagnostic medical devices 2024/7/21 :第9類工業監控設備和第11類 Cat 9 industrial monitoring and controlinstruments, and Cat 11 -RoHS Pack 24 (*) recommendations	
18(b)-I(Pb)	做為醫學用光療機之放電燈，其中含有磷，例如BSP(BaSi2O5: Pb)不包含附錄 4 第 34 項，則放電燈中的螢光粉，其鉛作為觸發源鉛含量可佔 1% 或更少。 New item: 18 (b)-II : Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps containing phosphors such as BSP (BaSi2O5: Pb) when used in medical phototherapy equipment Note: Pack 24 2022/2/25 proposes to classify Exemption 18(b)-I (Annex III) and Exemption 34 (Annex IV) as new clauses (18(b)-II). Substitute 18(b)-I for 18(b)-II)	到期日Expires on : 2026/7/21 Cat 5,8,9 -RoHS Pack 24 (*) recommendations	
19 (Pb)	緊縮節能燈中作為汞的特定成分中PbBiSn-Hg及PbInSn-Hg中的鉛以及作為輔助汞合金中PbSn-Hg中的鉛 Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	到期日:2011/6/1 Expires on 2011/6/1	
20 (Pb)	液晶顯示器中連接前後平板螢光燈基質的玻璃中的氧化鉛 Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	到期日:2011/6/1 Expires on 2011/6/1	
21(Pb) (Cd)	用於硼矽酸鹽玻璃瓷漆的印墨所含的鉛及鎘。 Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	2020.2.29 移至21(a) ~ (c) (Shifted to 21(a)-(c))	到期日Expires on : 2021/7/21 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21: 9 , 11 EEE
21(a)(Cd)	鎘應用在EEE顯示器和控制面板中照明應用組件提供濾鏡功能的彩色印刷玻璃。 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	到期日Expires on: 2021/7/21 : Cat 1~7, 10 註:不含本附錄第 21(b) 與 39 項 Note: Excluding items 21(b) and 39 of this appendix	
21(b)(Cd)	鎘應用於玻璃上瓷漆印刷油墨，例如硼矽酸鹽和鈉鈣玻璃。 Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	到期日Expires on: 2021/ 7/21 Cat 1~7, 10 註:不含本附錄第 21(b) 與 39 項 Note:Excluding items 21(b) and 39 of this appendix	
21(c) (Pb)	鉛應用於硼矽酸鹽玻璃以外使用的瓷漆印刷油墨。 Lead in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	到期日:2021/ 7/21 Expires on 2021/ 7/21	
23 (Pb)	鉛用於細間距零件零件之表面處理，但不包括間距等於或小於0.65mm之連接器。 Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less	屆期Expired 2010/9/24	

No.	豁免清單 Exemption	豁免期限（注1、2、3） Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
24 (Pb)	通孔盤狀及平面陣列陶瓷多層電容器焊料所含的鉛 Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	屆期Expired 2021/7/21	到期日Expires on : 2021/7/21 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21: 9 , 11 EEE
25 (Pb)	表面傳導式電子發射顯示器 (SED) 的構件所用的氧化鉛，尤其是密封玻璃 (seal frit) 及 玻璃環 (frit ring) 中。 Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	到期日:2016/7/21 Expires on 2016/7/21	到期日Expires on : 2021/7/21 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21: 9 , 11 EEE
26 (Pb)	藍黑燈管(BLB)玻璃外罩所含的氧化鉛 Lead oxide in the glass envelope of black light blue lamps	到期日:2011/6/1 Expires on 2011/6/1	
27 (Pb)	在大功率揚聲器(針對聲功率等級在125dB SPL或更高時運行幾小時)中作為轉換器焊料的鉛合金 Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	到期日:2010/9/24 Expires on 2010/9/24	
29 (Pb)	第69/493/EEC 號指令 附件 1(第一、二、三及四 類所指水晶玻璃含有的鉛) Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	到期日Expires on: 2026/ 7/21 : Cat 3,4,5 ,11 2023/7/21:Cat 8 in-vitro diagnostic medical devices; 2024 /7/21 :Cat 9 industrial monitoring and control instruments. -RoHS Pack 24 ^(*) recommendations	
30 (Cd)	音壓大於100dB(A) 的大功率揚聲器中，與音圈轉換器連接電導體之電機/機械焊料中的鎘合金。 Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	2021.7.21 延長申請中 Requested renewal	到期日Expires on : 2021/ 7/21 : 第8 體外和第9類工業除外 8 and 9 other than in vitro and industrial 2023 / 7/21 : 8 2024 / 7/21 : 9 , 11 other EEE
32 (Pb)	氬及氫雷射管中，使用於視窗結構的密封玻璃中的氧化鉛。 Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	到期日Expires on : 2024/7/21 : Cat 11 2026/7/21 : Cat 6,8,9 - RoHS Pack 24 ^(*) recommendations	
33 (Pb)	用以焊接電源變壓器中直徑100 微米及以下的幼身銅線的焊料中的鉛 Lead in solders for the soldering of thin copper wires of 100 im diameter and less in power transformers	到期日:2016/7/21 Expires on 2016/7/21	到期日Expires on : 2021/7/21:8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023 /7/21 : 8 2024 /7/21 : 9 ,11 other EEE
34 (Pb)	金屬陶瓷質的微調電位器組件中的鉛 Lead in cermet-based trimmer potentiometer elements	到期日Expires on : 2024/7/21 全類別All categories - RoHS Pack 24 ^(*) recommendations	
36 (Hg)	直流等離子顯示器中陰極濺射抑制劑中的汞,其含量不得超過30毫克/顯示器 Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	到期日:2010/7/1 Expires on 2010/7/1	
37 (Pb)	以硼酸鋅玻璃體為基礎的高壓二極體的電鍍層的鉛含量 Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	到期日:2021/7/21 Expires on 2021/7/21	到期日Expires on : 2021/7/21: 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21 : 9 ,11 other EEE
37 (Pb)	以硼酸鋅玻璃體為基礎的高壓二極體的電鍍層的鉛含量 Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	到期日:2021/7/21 Expires on 2021/7/21	到期日Expires on : 2021/7/21: 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023/7/21 : 8 2024/7/21 : 9 ,11 other EEE
38 (Cd)	用氧化鉍連接鋁製成的厚膜漿料中鎘和氧化鎘的含量 Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	到期日:2016/7/21 Expires on 2016/7/21	到期日Expires on : 2021/7/21: 8 and 9 體外和工業除外 8 and 9 other than in vitro and industrial 2023 /7/21 : 8 2024 /7/21 : 9 ,11 other EEE

No.	豁免清單 Exemption	豁免期限 (注1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
39 (a)(Cd)	用於顯示照明應用的降檔鎘基半導體納米晶量子點中的硒化鎘 (<每毫米2顯示幕面積0.2 µg Cd) Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0,2 µg Cd per mm 2 of display screen area)	到期日:2025/11/21 Expires on 2025/11/21	
39 (b)(Cd)	直接沉積在用於顯示和投影應用的LED半導體晶片上的降頻半導體奈米晶體量子點中的鎘(鎘在每平方毫米的LED晶片表面小於5 µg)，每個設備的最大含量為1 mg Cadmium in downconverting semiconductor nanocrystal quantum dots deposited directly on LED semiconductor wafers for display and projection applications (less than 5 µg of cadmium per square millimeter of LED wafer surface), with a maximum content of 1 mg per device	到期日:2025/11/21 Expires on 2025/11/21	
40 (Cd)	專業音響設備中，類比光偶合器之光阻內所含的鎘 Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	到期日:2013/12/31 Expires on 2013/12/31	
41 (Pb)	使用於點火模組和其他電子電氣發動機控制系統中，電子電氣元件的焊料和最終表面材料以及使用於印刷電路板表面材料中的鉛 lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems	到期日 Expires on : 2022/3/31	到期日 Expires on : 2021/7/21: 8 and 9 and 11 體外和工業除外 8 and 9 and 11 other than in vitro and industrial 2023 /7/21 : 8 2024 /7/21 : 9 2022 /3/31 :11
42 (Pb)	鉛應用於非道路專業用途設備的柴油或氣體燃料動力內燃機的軸承和襯套中： - 發動機總排量 ≥15 升；或是 - 發動機總排量 <15 升，發動機設計用於需要信號啟動和滿載之間的時間小於 10 秒的應用；或定期維護通常在惡劣和骯髒的戶外環境中進行，例如採礦，建築和農業應用。 第11類： 2024 /07/21，不包括本附錄第 6(c) 項所涵蓋的應用 Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment: — with engine total displacement ≥ 15 litres; or — with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications.		到期日 Expires on: 2024.7.21 (第11類適用，本附錄第6(c)所列申請除外) (Applies to category 11, excluding applications covered by entry 6(c))
43 (DEHP)	設計用於並非只供消費者使用的設備中的發動機系統的橡膠部件，非人體粘膜接觸或人體皮膚長時間接觸的塑料中的鄰苯二甲酸二(2-乙基己基)酯，並且鄰苯二甲酸二(2-乙基己基)酯的濃度值不超過： (a) 橡膠重量的30%，用於 (i) 墊圈塗層 (ii) 固體橡膠墊圈；或 (iii) 連接到發動機上並至少三個部件組成的使用電能、機械能或液壓能工作的橡膠部件。 (b) 橡膠重量的10%，針對(a)條中未提及的橡膠部件。 在本條目中，“長時間接觸人體皮膚”是指每天持續接觸超過10分鐘或間歇接觸超過30分鐘。 Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and the concentration value of bis(2-ethylhexyl) phthalate does not exceed: (a) 30 % by weight of the rubber for (i) gasket coatings; (ii) solid-rubber gaskets; or (iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine. (b) 10 % by weight of the rubber for rubber-containing components not referred to in point (a). For the purposes of this entry, "prolonged contact with human skin" means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.		到期日 Expires on: 2024/7/21 11 other EEE
44(Pb)	在歐洲議會和歐盟理事會法規 (EU) 2016/1628範圍內的內燃機傳感器、執行器和發動機控制單元焊料中鉛，安裝在固定位置使用設備中，專為專業人員設計，但也適用於非專業人員。 Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council, installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users.		到期日 Expires on: 2024/7/21 11 other EEE
45 (Pb) (Cd)	二肼化鉛、苯乙炔酸鉛、二酸鉛、橙鉛(四氧化鉛)、民用(專業)用炸藥的電子引發劑中的二氧化鉛和民用(專業)用炸藥電引發劑的長期煙火延遲裝藥鉻酸鉀。 Lead diazide, lead styphnate, lead dipicramate, orange lead (lead tetroxide), lead dioxide in electric and electronic initiators of explosives for civil (professional) use and barium chromate in long time pyrotechnic delay charges of electric initiators of explosives for civil (professional) use		到期日 Expires on: 2026/4/20 11 other EEE

No.	豁免清單 Exemption	豁免期限 (註1、2、3) Expiration date	
		類別Category 1-7、10	類別Category 8、9、11
46 (Pb) (Cr6+)	用於電氣電子門窗且含有聚氯乙烯廢料(“recovered rigid PVC”，以下簡稱“回收硬質PVC”)製成之塑膠材料，其中回收硬質PVC材料中鎘的濃度不超過0.1%(重量計)，鉛的濃度不超過1.5%(重量計)。 自2026年5月28日起，從電氣電子門窗中回收的硬質PVC僅可用於製造符合歐盟法規(EC) No 1907/2006 附錄XVII第63條18(a)至(d)項規定類別的新產品。 對於含有鉛濃度等於或超過0.1% (重量計)的回收硬質PVC的PVC產品供應商，應確保在將這些產品投放市場之前，它們被清晰、易讀且不可磨滅地標記：“Contains ≥ 0,1 % lead”。如果由於產品的性質而無法在產品上提供標記，則該標記在產品的包裝上。 PVC產品供應商應在國家執法機構要求時，提交書面證據，以證明這些產品中回收硬質PVC的來源。提供可追溯性和回收成分證明的計劃頒發的證書（例如根據 EN 15343:2007 或等效認可標準開發的證書）來證明在歐盟生產的PVC產品上的相關主張。對於進口產品中 硬質PVC 來源的回收聲明應附上由獨立第三方頒發的同等可追溯性和再生含量證明的證書。 Cadmium and lead in plastic profiles containing mixtures produced from polyvinyl chloride waste (hereinafter referred to as “recovered rigid PVC”), used for electrical and electronic windows and doors, where the concentration in the recovered rigid PVC material does not exceed 0,1 % cadmium by weight and 1,5 % lead by weight. From 28 May 2026, rigid PVC recovered from electrical and electronic windows and doors shall only be used for the production of new articles under the categories specified in entry 63, points 18(a) to (d) of Annex XVII to Regulation (EC) No 1907/2006. Suppliers of PVC articles containing recovered rigid PVC with a concentration of lead equal to or greater than 0,1 % by weight of the PVC material shall ensure, before placing those articles on the market, that they are visibly, legibly and indelibly marked with the statement: “Contains ≥ 0,1 % lead” . Where the marking cannot be provided on the article due to the nature of the article, it shall be on the packaging of the article. Suppliers of PVC articles containing recovered rigid PVC shall submit to national enforcement authorities upon request documentary evidence to substantiate the claims on the recovered origin of the PVC in those articles. Certificates issued by schemes to provide proof of traceability and recycled content, such as those developed according to EN 15343:2007 or equivalent recognised standards, may be used to substantiate such claims for PVC articles produced in the Union. Claims made on the recovered origin of the PVC in imported articles shall be accompanied by a certificate that provides equivalent proof of traceability and recycled content, issued by an independent third party.		到期日 Expires on: 2028/5/28 11 other EEE

註1: 第8、9類中，豁免期限為“2021.7.21”的項目中，體外診斷用醫療器械及工業用監視及控制器械的豁免期限如下所示。

- 第8類（體外診斷用醫療器械）：2023.7.21 舉例:表稱:8 或Cat8 ,豁免期限再區分主要8或主要類別8以外的第8項 一般醫療用
- 第9類（工業用監視及控制器械）：2024.7.21

此外，關於豁免期限為“2021.7.21”以外的項目，在第8、9類的所有項目都適用於所記載的日期。

註2: 原則上，第11類的豁免期限都將從適用開始至5年後（2024.7.21）。

註3：“商討中”是指，豁免期限已過，歐盟委員會正在審議延長或將來考慮延長。

“延長申請中”是指，豁免期限即將要到期，且延期申請已經完成。

Notes 1 : As for the exempted items in Category 8 and 9 where the expiration date is specified as "July 21, 2021", the expiration dates of in-vitro diagnostic medical device and industrial monitoring and control instruments are as follows.

- Category 8 for in-vitro diagnostic medical device: July 21, 2023
Ex: The table is called: 8 or Cat8, and the exemption period is divided into the 8th item other than the main 8 or the main category 8. General medical use.
- Category 9 for industrial monitoring and control instruments: July 21, 2024

Nother that, as for the exempted items where the expiration date is not "July 21, 2021", the given date is the expiration date that is applied to all the items in Category 8 and 9.

Notes 2 : Expiration date in Category 11 is in principle “July 21, 2024”, five years after the start of application.

Notes 3 : “Under discussion” means that the expiration date of exemption has already passed, and the European Commission is under the discussion of exemption renewal or will discuss from now on.

“Requested renewal” means that the expiration date will be passed from now on and renewal request has been submitted.

1.4 REACH規則的SVHC

SVHCs in REACH

由于REACH规则的SVHC仍不斷修訂，所以需要時常確認其最新版本。最新版請參照ECHA官方主頁，以下網站供關注連結取得目前最新的公佈的高關注物質清單。

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

SVHCs of REACH Regulation are subject to continual addition, and suppliers should be responsible for always ensuring that they refer to the latest version. Refer to the following ECHA website for the latest SVHCs information. The following websites are links to obtain the latest list of substances of very high concern.

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

1.5 REACH規則的附錄17

Annex XVII in REACH

供應商需確實掌握REACH法規之變動，包含高關注物質(SVHC)清單、附錄17(禁限用物質)、POPs，並確保符合法規要求。以下網站供關注連結取得目前最新的公佈的物質清單。

連結網址：<https://echa.europa.eu/regulations/reach/understanding-reach>

Suppliers need to be sure of changes in the REACH regulations, including the SVHC list, and attached 17 (prohibited substances), and ensure compliance with regulatory requirements. The following websites are links to obtain the latest list of substances of very high concern.

Destination URL: <https://echa.europa.eu/regulations/reach/understanding-reach>

(註)：(Note):

1.如果判斷環境負荷物質的含量超出響應用途適用等級限值，請立即與我們聯繫。

Please contact Asia Optical immediately if the content of any environment-loading substances is judged exceeding the applicable level limit of the responsive applications.

2.對於管理對象範圍外的用途，不禁止使用。但必須掌握其使用信息(含有量、含有部位等)。

For the applications outside of the management targets range, the use of substances is not forbidden. But the usage data such as contents and positions, etc. should be kept informed.

3. "ppm"指"parts per million"，意為百萬分之一。本標準中，表示重量比率，1ppm=1mg/kg。

The unit "ppm" refers to "parts per million" which, in this standard, represents the weight ratio 1ppm=1mg/kg.

單位"ppb"指"Parts Per Billion"，意為十億分之一，10⁻⁹。25ppb=0.025ppm；1ppb=0.001ppm

The unit "ppb" means "Parts Per Billion, which means one billionth of a billionth, 10⁻⁹. 25ppb= 0.025 ppm; 1ppb=0.001ppm.

4. "CAS編號"表示美國化學協會化學文摘社 (Chemical Abstracts Service，CAS) 的化學文獻登記號，表是"CAS Registry Number"的縮寫。

"CAS No." is the abbreviation of "CAS Registry Number" which refers to the chemical registry number of the Chemical Abstracts Service (CAS) of the United States.

5. 金屬化合物的對象範圍含量，表請使用金屬換算係數進行計算。

For the target range content of metal compounds, please use the metal switch coefficient for calculation.

6. 本標準中規定的管控對象範圍不完全包括各國家法律法規管控範圍，表故供應商除需滿足本標準之對象範圍，表還需滿足當地法律法規之相關環保要求。

The management targets range regulated in this standard does not fully cover the regulations of all countries. The supplier(s) should not only abide by the targets range of this standard, but also meet the related environmental requirements specified in the laws and regulations of local country.

7. 本標準所代表的是亞洲光學對環境負荷物質之相關管理要求，表當亞光客戶要求嚴格亞洲光學綠色採購基準要求時，亞洲光學對其管理要求以客戶標準為準，並可能要求供應商提供相關的使用信息(如產品的化學成分構成或第三者檢驗機構的檢驗報告)。

This standard represents the related management requirements of Asia Optical. Asia Optical may apply its customer(s) standards to supplier(s), and may request supplier(s) to provide related usage information (such as product chemical composition or test report from third-party test labs) if and when its customer(s) require. Asia Optical to implement stricter green product procurement standards.

8. 本標準中物質的管理限值參考各法律法規要求，但超出亞洲光學的管理需要，亞洲光學制定之管理限值可能嚴於法令法規的限值，供應商不能滿足亞洲光學管控對象範圍之響應限值時，請與亞洲光學聯繫。

The management limits of substances stipulated in this standard are basically referenced to related laws and regulations. However, based on Asia Optical's management needs, it may require stricter management limits than that of related laws and regulations. If supplier(s) may not satisfy the stipulated responsive limits of Asia Optical's management targets range, please contact Asia Optical without any delay.

2. 包裝材料

Packaging Materials

2.1.包裝材料的禁止含有化學物質

Prohibited Chemical Substances in Packaging Materials

亞光購買的包裝材料中禁止含有以下所示的化學物質。針對這些化學物質，其含有濃度必須低於最大濃度值。此外，若同一欄內包含多個最大濃度值，則必須滿足全部條件。

This section lists the chemical substances that are prohibited to be contained in packaging materials to be supplied to Asia. The concentration of these chemical substances in Asia products must be less than or equal to the threshold. If multiple thresholds are written in a single threshold field, all of them must be satisfied.

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
1	特定重金屬 • 鎘/鎘化合物 • 六價鉻化合物 • 鉛/鉛化合物 • 汞/汞化合物 (續) Specific Heavy Metals • Cd/Cd Compounds; • CrVI Compounds; • Pb/Pb Compounds; • Hg/Hg Compounds (continued)	• EU指令 94/62/EC EU 94/62/EC Directive • 美國特定洲包材規範 美國包裝材毒性物質資訊交流中心 (Toxics in Packaging Clearinghouse, TPCH)	全部 All	有意添加(E8109-02) Intentionally Cd, Hg, Pb及Cr (VI)合計包裝材料 種類 0.01wt% by weight of the sum of Cd, Hg, Pb & Cr(VI) in the material (100ppm),Cd<5ppm	顏料、塗料、PVC穩定劑 Pigment, paint, stabilizer for PVC
相關化學物質的代表性實例 Representative examples of relevant substance					
鎘/鎘化合物 Cadmium/Cadmium Compounds					CAS No.
鎘 Cadmium					7440-43-9
氧化鎘 Cadmium oxide					1306-19-0
硫化鎘 Cadmium sulfide					1306-23-6
氯化鎘 Cadmium chloride					10108-64-2
硫酸鎘 Cadmium sulfate					10124-36-4
其他鎘化合物 Other cadmium compounds					—
六價鉻化合物 Chromium VI Compounds					CAS No.
氧化鉻(VI) Chromium (VI) oxide					1333-82-0
鉻酸鋇 Barium chromate					10294-40-3
鉻酸鈣 Calcium chromate					13765-19-0
三氧化鉻 Chromium trioxide					1333-82-0
鉻酸鉛 (II) Lead (II) chromate					7758-97-6
鉬鉻紅 Lead chromate molybdate sulphate red					12656-85-8
顏料黃-34 Lead sulfochromate yellow					1344-37-2
鉻酸鈉 Sodium chromate					7775-11-3
重鉻酸鈉 Sodium dichromate					10588-01-9
鉻酸鋇 Strontium chromate					7789-06-2
重鉻酸鉀 Potassium dichromate					7778-50-9
鉻酸鉀 Potassium chromate					7789-00-6
氫氧化鉻酸鋅鉀 Potassium hydroxyoctaoxodizincatedichromate					11103-86-9
氫氧化鉻酸鋅 Pentazinc chromate octahydroxide					49663-84-5
鉻酸鋅 Zinc chromate					13530-65-9
其他六價鉻化合物 Other chromium VI compounds					—
鉛和鉛化合物 Lead/lead Compounds					CAS No.
鉛 Lead					7439-92-1
硫酸鉛(II) Lead (II) sulfate					7446-14-2
碳酸鉛 Lead (II) carbonate					598-63-0
鉻酸鉛 (II) Lead (II) chromate					7758-97-6
鉬鉻紅 Lead chromate molybdate sulphate red					12656-85-8
碱式碳酸鉛 (亞碳酸鉛) Lead hydrocarbonate					1319-46-6
醋酸鉛 Lead acetate					301-04-2

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
	特定重金屬 • 鎘/鎘化合物 • 六價鉻化合物 • 鉛/鉛化合物 • 汞/汞化合物 Specific Heavy Metals • Cd/Cd Compounds; • CrVI Compounds; • Pb/Pb Compounds; • Hg/Hg Compounds	乙酸鉛 (II) 、三水合物 Lead (II) acetate, trihydrate			6080-56-4
		磷酸鉛 Lead phosphate			7446-27-7
		硒化鉛 Lead selenide			12069-00-0
		氧化鉛(IV) Lead (IV) oxide			1309-60-0
		氧化鉛(II、IV) Lead (II,IV) oxide			1314-41-6
		硫化鉛(II) Lead (II) sulfide			1314-87-0
		氧化鉛(II) Lead (II) oxide			1317-36-8
		碱式碳酸鉛(II) Lead (II) carbonate basic			1319-46-6
		氫氧碳化鉛 Lead hydroxidcarbonate			1344-36-1
		砷酸氫鉛 Lead hydrogen arsenate			7784-40-9
		磷酸鉛(II) Lead (II) phosphate			7446-27-7
		顏料黃-34 Lead sulfochromate yellow			1344-37-2
		鈦酸鉛(II) Lead (II) titanate			12060-00-3
		硫酸鉛 Lead sulfate, sulphuric acid, lead salt			15739-80-7
		三碱式硫酸鉛 Lead sulphate, tribasic			12202-17-4
		硬脂酸鉛 Lead stearate			1072-35-1
		疊氮化鉛 Lead azide			13424-46-9
		苦味酸鉛 Lead dipicrate			6477-64-1
		收斂酸鉛 Lead styphnate			15245-44-0
		其他鉛化合物 Other lead compounds			—
		汞/汞化合物 Mercury /Mercury Compounds			CAS No.
		汞 Mercury			7439-97-6
		氯化汞 (2+) Mercuric chloride			33631-63-9
		氯化汞(II) Mercury (II) chloride			7487-94-7
		硫酸汞 Mercuric sulfate			7783-35-9
		硝酸汞 (2+) Mercuric nitrate			10045-94-0
		氧化汞(II) Mercuric (II) oxide			21908-53-2
		硫化汞 (2+) Mercuric sulfide			1344-48-5
		其他汞化合物 Other mercury compounds			—
2	多氯聯苯類 (PCB類) 及指定替代品 Polychlorinated biphenyls(PCBs) and specific substitutes	• 與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally	塑化劑、粘接劑、膩子、嵌縫、背板、 填充劑、塗料(水性塗料除外)、印刷油墨 及無碳複寫紙 Plasticizers, adhesives, putty, caulking, sealing, fillers, paints (excluding water-based paint), printing ink, and carbonless copying paper
		相關化學物質的代表性實例 Representative examples of relevant substance			
		多氯聯苯類 (PCB類) Polychlorinated Biphenyls (PCBs)			
		多氯聯苯 (所有異構體和同系物) Polychlorinated Biphenyls (all isomers and congeners)			
		單甲基四氯二苯基甲烷(Ugilec141) Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)			
		單甲基二氯二苯基甲烷(Ugilec121,Ugilec21) Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)			
		單甲基二溴二苯基甲烷(DBBT) Monomethyl-dibromo-diphenyl methane (DBBT)			

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
3	多氯化萘 (至少含有3個氯原子)(PCN類) Polychlorinated naphthalenes (more than 3 chlorine atoms)	・ 與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally	木材防腐劑、驅蟲劑、防真菌劑、塗料 Antiseptics for wood, insecticide, mildew repellent, paints
		相關化學物質的代表性實例 Representative examples of relevant substance			
		多氯化萘 Polychlorinated naphthalenes CAS No.			
		多氯化萘 Polychlorinated naphthalenes 70776-03-3			
		其它多氯化萘 Other polychlorinated naphthalenes —			
4	多氯三聯苯類 (PCT類) Polychlorinated terphenyls(PCTs)	・ REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	包裝材料種類的 0.005% by weight of the packaging item (50ppm)	塑化劑、粘接劑、膩子、嵌縫、背板、填充劑、塗料(水性塗料除外)、印刷油墨及無碳複寫紙 Plasticizers, adhesives, putty, caulking, sealing, fillers, paints (excluding water-based paint), printing ink, and carbonless copying paper
		相關化學物質的代表性實例 Representative examples of relevant substance			
		多氯三聯苯類（PCT類） Polychlorinated Terphenyls (PCTs) CAS No.			
		PCT（多氯三聯苯類）(所有異構體和同系物) Polychlorinated Terphenyls (all isomers and congeners) 61788-33-8			
5	短鏈氯化石蠟類 (C10～13) (SCCPs) Shortchain chlorinated paraffins(C10－13) (SCCPs)	・ REACH規則 (EC)No.1907/2006的33條和7.2條 (2008.10.28 SVHC批准候選名單) Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization October 28, 2008)	全部 All	包裝材料種類的 0.1wt% by weight of the packaging item (1,000ppm)	PVC塑化劑、阻燃劑 Plasticizer for PVC, flame retardant
		相關化學物質的代表性實例 Representative examples of relevant substance			
		短鏈氯化石蠟類(C10～13) Shortchain chlorinated paraffins (C10－13) CAS No.			
		氯烷烴C10-13 Alkanes, C10-13, chloro 85535-84-8			
		氯烷烴C10-12 Alkanes, C10-12, chloro 108171-26-2			
		氯烷烴C12-13 Alkanes, C12-13, chloro 71011-12-6			
		氯烷烴 Alkanes, chloro 61788-76-9			
		其它短鏈氯化石蠟 Other Short Chain Chlorinated Paraffins —			
6	有機錫化合物 (三丁基錫化合物.三苯基錫化合物) ...續 Tin organic ompounds (Tributyl tin ompounds, Triphenyl tin compounds) ...(continued)	・ REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006 ・ 與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally 錫元素在包裝用品中的重量比 0.1wt% by weight of tin of the packaging item (1,000ppm)	抗菌抗真菌劑、塗料、顏料 antifungal agents, paint, pigment
		相關化學物質的代表性實例 Representative examples of relevant substance			
		有機錫化合物 Tin organic compounds CAS No.			
		三苯基錫N,N-二甲基二硫代氨基甲酸鹽 Triphenyltin-N, N-dimethyldithiocarbamate 1803-12-9			
		三苯基錫氟化物 Triphenyltinfluoride 379-52-2			

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
6	有機錫化合物 (三丁基錫化合物、三苯基錫化合物) Tin organic ompounds (Tributyl tin ompounds, Triphenyl tin compounds)	三苯基錫乙酸鹽 Triphenyltinacetate			900-95-8
		三苯基錫氯化物 Triphenyltinchloride			639-58-7
		三苯基錫羥化物 Triphenyltinhydroxide			76-87-9
		三苯基錫脂肪酸鹽(C=9～11) Triphenyltin fattyacid((9-11)salt)			18380-71-7 , 18380-72-8 47672-31-1 , 94850-90-5
		三苯基錫氯醋酸鹽 Triphenyltinchloroacetate			7094-94-2
		三丁基錫甲基丙烯酸酯 Tributyltinmethacrylate			2155-70-6
		雙（三丁基錫）=富馬酸酯 Bis(tributyltin)fumalate			6454-35-9
		三丁基錫氟化物 Tributyltinfluoride			30593
		雙（三丁基錫）2,3-二溴丁二酸鹽 Bis(tributyltin)2,3-dibromosuccinate			31732-71-5
		三丁基錫乙酸鹽 Tributyltinacetate			56-36-0
		三丁基錫月桂酸鹽 Tributyltinlaurate			3090-36-6
		雙（三丁基錫）鄰苯二甲酸鹽 Bis(tributyltin)phthalate			4782-29-0
		烷基=丙烯酸酯,甲基=甲基丙烯酸酯, 及三丁基錫=甲基丙烯酸酯的共聚合物（烷基;C=8） Copolymer of alkyl (c=8) acrylate, methyl methacrylate and tributyltin methacrylate			67772-01-4
		三丁基錫=氨基磺酸鹽 Tributyltinsulfamate			6517-25-5
		雙（三丁基錫）馬來酸酯 Bis(tributyltin)maleate			14275-57-1
		三丁基錫氯化物 Tributyltinchloride			1461-22-9 7342-38-3
		三丁基錫=環戊烷羧酸鹽及其類似化合物(三丁基錫=環烷酸)的混合物 Tributyltin cyclopentane carbonate = mixture			85409-17-2
		三丁基錫=1,2,3,4,4a,4b,5,6,10,10a-十氫-7-異丙基-1,4a-二甲基-1-菲羧酸鹽和類似化合物的混合物(三丁基錫酞酸 酸鹽) Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4adimethyl-1-phenanthrencarboxylatemix			26239-64-5
		其它有機錫化合物 Other Tin organic compounds			—
7	三丁基氧化錫 (TBTO) Tributyl tin oxide (TBTO)	- 與化學物質審查及生產等規制相關的法律(化審法) Japan Law concerning the evaluation of chemical substances - REACH規則 (EC)No.1907/2006的33條和7.2條 (2008.10.28SVHC批准候選名單) Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization October 28,2008)	全部 All	有意添加(E8109-02) Intentionally 包裝材料種類的 0.1wt% by weight of the packaging item (1,000ppm)	PVC穩定劑、矽樹脂和聚氨酯樹脂用的(固化)催化劑 Stabilizer for PVC, curing catalyst for silicone resin and urethane resin
		相關化學物質的代表性實例 Representative examples of relevant substance			
		三丁基氧化錫 (TBTO)類 Tributyl tin oxide (TBTO)			CAS No.
		三丁基氧化錫（TBTO）Tributyl tin oxide (TBTO)			56-35-9

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
8	二丁基錫化合物 (DBT) Dibutyltin (DBT) compounds	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	錫元素在包裝用品中的重量比 0.1wt% by weight of tin of the packaging item (1,000ppm)	塑化劑、紙張塗層劑、油墨、PVC穩定劑、矽樹脂和聚氨酯樹脂用的(固化)催化劑 Plasticizers, paper coatings, inks, stabilizer for PVC, curing catalyst for silicone resin and urethane resin
9	二辛基錫化合物 (DOT) Diocetyl tin (DOT) compounds	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	直接與皮膚接觸的紡織品 Textiles that come in contact with skin	錫元素在包裝用品中的重量比 0.1wt% by weight of tin of the packaging item (1,000ppm)	紡織品 Textiles
10	石棉類 Asbestos	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	全部 All	有意添加(E8109-02) Intentionally	絕緣體、填充材料、顏料、塗料、滑石粉 Insulator, filler, pigment, paint, talc
11	特定偶氮化合物 ...續 Specific AZO compounds ...(continued)	• REACH規則(EC)No.907/2006的附錄17 ANNEX XVII of REACH Regulation (EC) No 1907/2006	紡織品和皮革 Textiles and leather	用於包裝材料種類的成品紡織物/ 皮革制品的含量 0.003wt% by weight of the finished textile / leather packaging item (30ppm)	紡織物、顏料、染料、人工色素 Textile, pigment, dye, colorants

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																																														
11	特定偶氮化合物 Specific AZO compounds	相關化學物質的代表性實例 Representative examples of relevant substance <table><tr><td>特定胺 Aromatic Amines</td><td>CAS No.</td></tr><tr><td>4-氨基苯 Biphenyl-4-ylamine</td><td>92-67-1</td></tr><tr><td>聯苯胺 Benzidine</td><td>92-87-5</td></tr><tr><td>4-氯-2-甲基苯胺 4-chloro-o-toluidine</td><td>95-69-2</td></tr><tr><td>2-萘胺 2-naphthylamine</td><td>91-59-8</td></tr><tr><td>鄰氨基偶氮甲苯 o-aminoazotoluene</td><td>97-56-3</td></tr><tr><td>5-硝基-鄰甲苯胺 5-nitro-o-toluidine</td><td>99-55-8</td></tr><tr><td>4-對氯苯胺 4-chloroaniline</td><td>106-47-8</td></tr><tr><td>4-二氨基苯甲醚 4-methoxy-m-phenylenediamine</td><td>615-05-4</td></tr><tr><td>4,4'-亞甲基二苯胺 4,4'-methylenedianiline</td><td>101-77-9</td></tr><tr><td>3,3'-二氯聯苯胺 3,3'-dichlorobenzidine</td><td>91-94-1</td></tr><tr><td>3,3'-二甲氧基聯苯胺 3,3'-dimethoxybenzidine</td><td>119-90-4</td></tr><tr><td>3,3'-二甲基聯苯胺 3,3'-dimethylbenzidine</td><td>119-93-7</td></tr><tr><td>4,4'-二氨基-3,3'-二甲基二苯甲烷 4,4'-diaminodiphenylmethane 3,3'dimethyl</td><td>838-88-0</td></tr><tr><td>6-甲氧基-m-甲苯胺 6-methoxy-m-toluidine</td><td>120-71-8</td></tr><tr><td>4,4'-亞甲基-雙（2-氯苯胺） 4,4'-methylene-bis(2-chloroaniline)</td><td>101-14-4</td></tr><tr><td>4,4'-氧基二苯胺 4,4'-oxydianiline</td><td>101-80-4</td></tr><tr><td>4,4'-二氨基二苯硫化物 4,4'-thiodianiline</td><td>139-65-1</td></tr><tr><td>鄰甲苯胺 o-toluidine</td><td>95-53-4</td></tr><tr><td>4-甲基-m-亞苯基二胺 4-methyl-m-phenylenediamine</td><td>95-80-7</td></tr><tr><td>2,4,5-三甲基苯胺 2,4,5-trimethylaniline</td><td>137-17-7</td></tr><tr><td>鄰甲氧基苯胺 o-anisidine</td><td>90-04-0</td></tr><tr><td>4-氨基偶氮苯 4-amino azobenzene</td><td>60-09-3</td></tr></table> (註)：歐洲共同體的偶氮染料禁令適用於特定的偶氮染料和顏料，其偶氮基經過還原裂解，可生成上述22種芳香族胺中的一種。 (Note)：The European Community's ban applies to azocolourants and azodyes that by reductive cleavage of azo groups may release one of the above 22 aromatic amines.				特定胺 Aromatic Amines	CAS No.	4-氨基苯 Biphenyl-4-ylamine	92-67-1	聯苯胺 Benzidine	92-87-5	4-氯-2-甲基苯胺 4-chloro-o-toluidine	95-69-2	2-萘胺 2-naphthylamine	91-59-8	鄰氨基偶氮甲苯 o-aminoazotoluene	97-56-3	5-硝基-鄰甲苯胺 5-nitro-o-toluidine	99-55-8	4-對氯苯胺 4-chloroaniline	106-47-8	4-二氨基苯甲醚 4-methoxy-m-phenylenediamine	615-05-4	4,4'-亞甲基二苯胺 4,4'-methylenedianiline	101-77-9	3,3'-二氯聯苯胺 3,3'-dichlorobenzidine	91-94-1	3,3'-二甲氧基聯苯胺 3,3'-dimethoxybenzidine	119-90-4	3,3'-二甲基聯苯胺 3,3'-dimethylbenzidine	119-93-7	4,4'-二氨基-3,3'-二甲基二苯甲烷 4,4'-diaminodiphenylmethane 3,3'dimethyl	838-88-0	6-甲氧基-m-甲苯胺 6-methoxy-m-toluidine	120-71-8	4,4'-亞甲基-雙（2-氯苯胺） 4,4'-methylene-bis(2-chloroaniline)	101-14-4	4,4'-氧基二苯胺 4,4'-oxydianiline	101-80-4	4,4'-二氨基二苯硫化物 4,4'-thiodianiline	139-65-1	鄰甲苯胺 o-toluidine	95-53-4	4-甲基-m-亞苯基二胺 4-methyl-m-phenylenediamine	95-80-7	2,4,5-三甲基苯胺 2,4,5-trimethylaniline	137-17-7	鄰甲氧基苯胺 o-anisidine	90-04-0	4-氨基偶氮苯 4-amino azobenzene	60-09-3
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12	聚氯乙稀(PVC) 和 PVC共聚物 Polyvinyl chloride (PVC)& PVC Copolymers	• JS709	全部 All	塑料包裝材料 種類中氯含 量合計0.09wt% (900ppm) total chlorine content by weight in the plastic packaging item	絕緣材料、透明紙、片材、耐 高溫標籤、吸塑包裝 Insulator,transparency, sheath material, tamperproof labels, clam-shell packs																																														
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No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use
13	二甲基富馬酸鹽 (富馬酸二甲酯) Dimethyl fumarate (DMF)	歐洲委員會認定2009/251/EC COMMISSION DECISION 2009/251/EC	全部 All	包裝材料種類的 0.00001wt% by weight of the packaging item (0.1ppm)	乾燥劑、防真菌劑 Desiccating agent, mildewproofing agent
14	2-(2H-1,2,3-苯并三氮唑-2-基)-4,6-二叔丁基酚 Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances	全部 All	有意添加(E8109-02) Intentionally	粘接劑、塗料、印刷油墨、塑料、墨帶、油灰、表面塗層及密封用填充劑 Adhesives, paints, printing inks, plastics, inked ribbons, putty, caulking or sealing fillers
15	六溴環十二烷 (HBCDD)及其所有主要非對應異構體 Hexabromocyclododecane (HBCDD) and all major diastereoisomers	- 與化學物質審查及生產等規制相關的法律 (化審法) Japan Law concerning the evaluation of chemical substances - 持久性有機污染物POPs法規 (EU) 2019/1021 (2019年7月15日公布) POPs: Regulation (EU) 2019/1021 2019-07-15	全部 All	成形成品與包裝材料種類的 0.0075wt% by weight of the packaging item (75ppm)	主要用作發泡聚苯乙烯和特定纖維的阻燃劑 Flame retardant mainly used for expanded polystyrene (PS), polyurethane (PU) and some types of fiber
		中國《關於持久性有機污染物的斯德哥爾摩公約》新增列六溴環十二烷(HBCDD)修正案》生效的公告 China's "Stockholm Convention on Persistent Organic Pollutants" Newly Listed HBCD Amendment "Announcement on Entry into Force"	全部 All	有意添加(E8109-02) Intentionally	主要用作為阻燃劑，用於塑膠、發泡聚苯乙烯、聚苯乙烯 Mainly used as flame retardant, used in plastics, foamed polystyrene, polystyrene
		相關化學物質的代表性實例 Representative examples of relevant substance			

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use																				
16	鄰苯二甲酸酯類 (phthalates)	• 美國特定洲包材規範 美國包裝材毒性物質訊息交流中心 (Toxics in Packaging Clearinghouse, TPCH) 美國19個州管制參照 19 U.S. states control reference https://toxicsinpackaging.org/model-legislation/	全部 All *豁免參照 Exempted Reference TPCH官網 https://toxicsinpackaging.org/model-legislation/	鄰苯二甲酸酯類 總濃度合計 <0.01wt% (100ppm) Total phthalates <0.01wt% (100ppm)	包裝材料、銷售促銷材料，配件類 中的可塑劑 Plasticizers in packaging materials, sales promotion materials, accessories																				
17	全氟和多氟烷基物質 (PFAS) 包含長鏈烷基羧酸鹽 類(LCPFAC) Perfluorinated and Polyfluoroalkyl Substances (PFAS) Contains long chain alkyl fluorocarboxylates (LCPFAC)	• 美國特定洲包材規範 美國包裝材毒性物質訊息交流中心 (Toxics in Packaging Clearinghouse, TPCH)	全部 All *豁免參照 Exempted Reference TPCH官網 https://toxicsinpackaging.org/model-legislation/	不得檢出 No Detectabl	禁止銷售或分裝之包裝組件																				
		• 加利福尼亞州第65提案(加州65法案) California Proposition 65 列入日:2022年2月25日	全部 All	含有需報告 (加州65警告標示 The product contains a California 65 warning label)																					
		• 斯德哥爾摩公約 • Stockholm Convention	全部 All	有意添加(E8109-02) Intentionally																					
		• 美國/加利福尼亞州 AB1817 US California AB1817	纖維產品 Textile articles	• 有意添加(E8109-02) Intentionally • 材料中總有機氟的 0.01wt%(100ppm) 0.01% by weights(100ppm) of total organic fluorine in material	PFAS的「纖維產品」指的是，全部 或部分使用纖維的服飾，裝飾品， 手袋/手提包，手帕，吊帶等的產 品。皮革，無紡布，海綿等也使用 纖維的產品或包裝材料也屬於對 象。 in "Textile articles" means refers to apparel, accessories, backpacks, handbags, carrying cases, straps, and other products made entirely or partially of textiles. Products and packaging materials that use textiles such as leather, non-woven fabrics, sponges, etc. are also included in "textile articles".																				
		從2026年1月1日起，最大濃度值將有以下更改。 The following thresholds shall apply from January 1, 2026 (From one year prior to the effective date). • 纖維材料中總有機氟的 0.005 wt%(50ppm) • 0.005% by weights(50ppm) of total organic fluorine in material																							
		相關化學物質的代表性實例 Representative examples of relevant substance																							
<table><tr><td>PFOA類 PFOAs</td><td>CAS No.</td></tr><tr><td>全氟辛酸 Perfluorooctanoic acid</td><td>335-67-1</td></tr><tr><td>全氟辛酸及其鹽類 Perfluorooctanoic acid and its salts</td><td>335-95-5 2395-00-8</td></tr><tr><td>十五代氟鋅酸銨鹽 Ammonium pentadecafluorooctanoate</td><td>3825-26-1</td></tr><tr><td>全氟辛酰氟 Pentadecafluorooctyl fluoride</td><td>335-66-0</td></tr><tr><td>十五氟辛酸甲酯 Methyl perfluorooctanoate</td><td>376-27-2</td></tr><tr><td>全氟辛酸乙酯 Ethyl perfluorooctanoate</td><td>3108-24-5</td></tr><tr><td>全氟辛烷磺酸 Perfluorooctane sulfonate (PFOS)</td><td>1763-23-1</td></tr><tr><td>全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors</td><td>-</td></tr><tr><td>全氟壬酸及其鹽類 Perfluorononanoic acid (PFNA) and its salts (*California Proposition 65 Date Listed:2021 / 12 / 31)</td><td>-</td></tr></table>						PFOA類 PFOAs	CAS No.	全氟辛酸 Perfluorooctanoic acid	335-67-1	全氟辛酸及其鹽類 Perfluorooctanoic acid and its salts	335-95-5 2395-00-8	十五代氟鋅酸銨鹽 Ammonium pentadecafluorooctanoate	3825-26-1	全氟辛酰氟 Pentadecafluorooctyl fluoride	335-66-0	十五氟辛酸甲酯 Methyl perfluorooctanoate	376-27-2	全氟辛酸乙酯 Ethyl perfluorooctanoate	3108-24-5	全氟辛烷磺酸 Perfluorooctane sulfonate (PFOS)	1763-23-1	全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors	-	全氟壬酸及其鹽類 Perfluorononanoic acid (PFNA) and its salts (*California Proposition 65 Date Listed:2021 / 12 / 31)	-
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18	全氟辛烷磺酸鹽 (PFOS) Perfluorooctane sulfonate(PFOS)	• 持久性有機污染物POPs法規 POPs: Regulation (EU) 2019/1021 • ECHA (REACH) 高度關注物質(SVHC) ECHA SVHCs	全部 All	有意添加 Intentionally																					
		• 加利福尼亞州第65提案(加州65法案) California Proposition 65 列入日Date Listed:2021 / 12 / 24	全部 All	含有需報告 (加州65警告標示 The product contains a California 65 warning label)																					
		相關化學物質的代表性實例 Representative examples of relevant substance																							
<table><tr><td>PFOS化合物 PFOS compounds</td><td>CAS No.</td></tr><tr><td>全氟辛烷磺酸鹽 (PFOS) Perfluorooctane Sulfonates (PFOS) C8F17SO2X (X為OR、NR或其他衍生產品) C8F17SO2X, where X = OR, NR or other derivative</td><td>1763-23-1</td></tr><tr><td>全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors</td><td>-</td></tr></table>						PFOS化合物 PFOS compounds	CAS No.	全氟辛烷磺酸鹽 (PFOS) Perfluorooctane Sulfonates (PFOS) C8F17SO2X (X為OR、NR或其他衍生產品) C8F17SO2X, where X = OR, NR or other derivative	1763-23-1	全氟辛烷磺酸及其鹽類及其轉化和降解前體 Perfluorooctane sulfonic acid (PFOS) and its salts and transformation and degradation precursors	-														
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No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	最大濃度值 Threshold Level	用法示例 Examples of Use	
19	全氟辛酸(PFOA)及其鹽類 Perfluorooctanoic acid (PFOA) and its salts.	· 持久性有機污染物POPs法規 (EU) 2019/1021 POPs: Regulation (EU) 2019/1021 · EU 規範實驗室檢驗規則:CEN/TS 15968 EU Specification Laboratory Inspection Rules: CEN/TS 15968	全部 All	包裝材料種類的 0.1wt% by weight of the packaging item (1,000ppm)	半導體用、滅火劑、防水劑、紙張表面處理劑、樹脂改性劑、離型劑、鐵氟龍前驅物 (FEP,PTFE,PBT粉末) Semiconductor,extinguishing agent,water epellent, paper surface-treating agent, and plastic modifier 、Teflon(FEP,PTFE,PBT)	
		· 挪威產品規則FOR-2004-06-01-922 Norway Product Regulations FOR-2004-06-01-922	針對除下述補充的特殊情況之外的全部包裝材料種類 All Packaging items except the following supplementary exempted applications	針對具有覆膜的包裝材料種類 1µg/m ² 1 µg/m ² in the coated packaging item		
				針對其他包裝材料品種 For other packaging items -包裝材料種類的 0.1wt% by weight of the packaging item (1,000ppm) -包裝材料種類中含有的化學藥品(純物質或混合物) 0.001wt by weight of substance (pure substance or its mixture) contained in the packaging item (10ppm)		
		· 加利福尼亞州第65提案(加州65法案) California Proposition 65 列入日Date Listed:2022 / 02 / 25	全部 All	禁止含有 Prohibited to contain "加州65警告標示" The product contains a California 65 warning label		
		PFOA類 PFOAs				CAS No.
		全氟辛酸 Perfluorooctanoic acid				335-67-1
		全氟辛酸及其鹽類 Perfluorooctanoic acid and its salts				335-95-5 , 2395-00-8 335-93-3
		十五代氟鋅酸銨鹽 Ammonium pentadecafluorooctanoate				3825-26-1
		全氟辛酰氟 Pentadecafluorooctyl fluoride				335-66-0
十五氟辛酸甲酯 Methyl perfluorooctanoate				376-27-2		
全氟辛酸乙酯 Ethyl perfluorooctanoate				3108-24-5		
20	全氟羧酸(C9-C14 PFCA)及其鹽類 (C9-C14 PFCAs), including their salts, and any combinations thereof	· REACH附錄十七 · Annex XVII to Regulation (EC) No 1907/2006 · 2023年2月25日起，不得製造或作為物質投放市場 From February 25, 2023, must not be manufactured or placed on the market as a substance	全部 All	· 物質、混合物或成品中.-C9-C14 PFCAs及其鹽類之總和低於 25 ppb · -C9-C14 PFCA 相關物質的總和低於260 ppb。 Mixture, or the article is below 25 ppbfor the sum of C9-C14 PFCAs and theirsalts or 260 ppb for the sum of C9-C14PFCA-relatedsubstances	半導體用、滅火劑、防水劑、樹脂改性劑、離型劑、鐵氟龍前驅物(FEP,PTFE,PBT粉末)、含全氟烷基的氟塑料和含氟彈性體 Semiconductor,extinguishing agent,water epellent, and plastic modifier 、Teflon(FEP,PTFE), perfluoroalkoxy-containing fluoroplastics and fluoroelastomers	
		· 加利福尼亞州第65提案(加州65法案) California Proposition 65 列入日Date Listed:2022 / 02 / 25	全部 All	含有需報告 (加州65警告標示 The product contains a California 65 warning label)		
21	礦物油芳香烴 含1-7個芳香環 (Mineral Oil Aromatic Hydrocarbons : MOAH)	· 法國循環經濟法令 French law (Article 112 of Law n 2020-105)	包材印刷油墨 Printing ink used in packaging	在油墨中的0.1wt% (1,000ppm) 0.1% by weights(1,000ppm) in ink	油墨製造用油脂 Oil used for ink production	
	礦物油芳香烴 含3-7個芳香環 (MOAH)			在油墨中0.0001wt% (1ppm) 0.0001% by weights (1ppm) in ink		
22	礦物油飽和烴 含16-35個碳原子 (MOSH)	· 法國循環經濟法令 French law (Article 112 of Law n 2020-105)	包材印刷油墨 Printing ink used in packaging	在油墨中0.1wt% (1,000ppm) 0.1% by weights(1,000ppm) in ink	油墨製造用油脂 Oil used for ink production	

3. 其他

Others

3.1 衝突礦產

Conflict minerals

取自『剛果民主共和國及周遭國家之礦區』開採之 金、錫石、黑鎢、鈹鉬鐵礦、鈷礦等稀有金屬。與其他開採區之雲母與鈷。以上地區礦物，因開採過程存在侵犯人權、雇用童工、破壞環境生態問題，且開採獲利供給 當地武裝份子，故被媒體稱為“衝突礦產”，這些金屬可能被廣泛的應用在資訊和通信技術產品上。實施管制的目的在於，實施管制的目的在於，藉由產品中有使用到上述礦物的企業，進行供應商調查並公佈其相關資訊，斷絕武裝勢力的資金來源。當產品中使用該種礦物時，供應商需利用RMI(責任礦產倡議組織)發行模板，進行溯源調查，避免誤用衝突礦產。

※責任調查含：金(Au)、鈹(Ta)、錫(Sn)、鎢(W)、鈷(Co)、雲母(Mica)

Conflict minerals

Gold, cassiterite, wolframite, coltan, cobalt and other rare metals mined in the "Mining Areas of the Democratic Republic of Congo and surrounding countries". Mica and cobalt from other mining areas. The minerals in the above areas are called "conflict minerals" by the media due to human rights violations, child labor, environmental and ecological problems in the mining process, and the profits from mining are supplied to local armed elements. These metals may be widely used in information and communication technology. on the product.

The purpose of the control is to cut off the source of funds for the armed forces by conducting supplier surveys and publishing relevant information by companies that use the above-mentioned minerals in their products.

When this mineral is used in products, suppliers need to use the template issued by the RMI (Responsible Minerals Initiative) to conduct traceability investigations to avoid misuse of conflict minerals.

※Responsibility investigation includes: gold (Au), tantalum (Ta), tin (Sn), tungsten (W), cobalt (Co), mica (Mica)

No.	物質群 Substance/Category	主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation	對象 Application(s)	規範 Specification	用法示例 Examples of Use
1	金 gold 錫 tin 鈹 tantalum 鎢 tungsten 鈷 cobalt 雲母(Mica)	多德－弗蘭克華爾街改革和消費者保護法案 Dodd-Frank Wall Street Reform and Consumer Protection Act (H.R. 4173) 責任商業聯盟(RBA)制定之負責任礦源採購計畫 (RMI) Responsible Business Alliance (RBA) Responsible Minerals Initiative (RMI)	全部 All	來源不可為『剛果民主共和國及周遭國家之礦區』 Sources do not : Democratic Republic of the Congo ("DRC") and adjoining countries *冶煉廠和精煉廠以 RMI 官方網站為準。 http://www.responsiblemineralsinitiative.org/smelters_refiners_lists RMI Conformant Smelters & Refiners (formerly CFSP Compliant Smelters & Refiners), following	資訊和通信技術產品 Information and communication technology products 車用與手機電池 Car and mobile phone batteries

3.4 加利福尼亞州第65提案(加州65法案) California Proposition 65 (California Act 65)

針對可能導致癌症、先天缺陷或其他生殖系統傷害的化學物質，加州政府所公布且每年至少更新清單一次，目前資料庫約包含900種以上化學物質。一旦一種化學物質被列入"加州65有毒有害物質清單"，若供應商於部品中使用或添加此類物質時，供應商需誠實揭露，其企業必須在 12個月內完成警告標示要求。

CP65加州法案 連結網址： <https://oehha.ca.gov/>

For chemicals that may cause cancer, birth defects, or other reproductive system damage, the California government has published a new inventory at least once every time, and the current asset library contains about 900 chemicals. Once a chemical substance is listed on the "California 65 Toxic and Hazardous Substances List", when a radon supplier uses or adds this radon to a part, the supplier must honestly disclose it and its company must complete the warning labeling requirement within 12 months.

CP65 California Act URL: <https://oehha.ca.gov/>

3.5 持久性有機汙染物(POPs)

斯德哥爾摩公約公告之管制物質:持久性有機汙染物(Persistent Organic Pollutants，簡稱POPs)
POPs管制標準以斯德哥爾摩公約網址公告為準。

公約公告網址: <http://chm.pops.int/TheConvention/ThePOPs/ListingofPOPs/tabid/2509/Default.aspx>

Persistent Organic Pollutants (POPs) of controlled substances and limitation shall be according to the publication on United Nations Environment Program of Persistent Organic Pollutants announcement.

<http://chm.pops.int/TheConvention/ThePOPs/ListingofPOPs/tabid/2509/Default.aspx>

3.6 中國揮發性有機化合物法規國家標準 (China National Standards on VOC regulation)

中國於2020年7月1日公告，其制定管制對象,含出口至中國或在中國生產,或使用相關管制原物料進行產品加工之企業。企業需遵守,如油墨、塗料、清洗劑與膠粘劑等 揮發性有機物 VOCs限值。

國家標準連結 網址： <http://std.sacinfo.org.cn/gnqc/queryInfo?id=DBFEEDF05290B415CFBBEAA40EA24D78>

China announced on July 1, 2020. It establishes control objects, including enterprises that export to or produce in China, or use relevant controlled raw materials for product processing. Companies need to comply with the VOCs limits of volatile organic compounds such as inks, coatings, cleaning agents and adhesives.

National Standard Website: <http://std.sacinfo.org.cn/gnqc/queryInfo?id=DBFEEDF05290B415CFBBEAA40EA24D78>

中华人民共和国国家标准 公告 (2020 年第 2 号) The National Standard Announcement of the People's Republic of China (No. 2 of 2020):

No.1	GB 30981-2020_工业防护涂料中有害物质限量(Limit values table of Coating)	實施日期:2020 年12月1日
No.2	GB 33372-2020_胶粘剂挥发性有机化合物限量(Limit values table of Adhesives)	實施日期:2020 年12月1日
No.3	GB 38508-2020_清洗剂挥发性有机化合物含量限值(Limit values table of Cleaning agents)	實施日期:2020 年12月1日
No.4	GB38507-2020_油墨中可挥发性有机化合物(VOCs)含量的限值(Limit values table of Printing ink)	實施日期:2021 年4月1日

3.7 美國有毒物質控制法 (U.S. Toxic Substance Control Act · TSCA)

由美國環境保護署 (EPA) 管理，TSCA Section 6(h) PBT 是指持久性、生物累積性和毒性 (Persistent, Bioaccumulative, and Toxic, PBT) 化學物質的管制法規。自 2021/3/8 起，如果產品未遵守 TSCA 頒布的最終規則要求，將被禁止投放美國市場。目前受管制的物質總共有五項 PBTs。根據 TSCA 第 15 節的規定，如果產品未遵守 TSCA 頒布的最終規則要求，將被禁止投放美國市場。

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

Managed by the U.S. Environmental Protection Agency (EPA), TSCA Section 6(h) PBT refers to the regulation of Persistent, Bioaccumulative, and Toxic (PBT) chemical substances. Starting from 2021/3/8, if the product fails to comply with the final rule requirements issued by TSCA, it will be banned from being placed on the US market. There are a total of five PBTs for substances currently under control. According to section 15 of TSCA,

if a product fails to comply with the final rules issued by TSCA, it will be prohibited from being placed on the US market.

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

簡稱 Abbreviation	化學物質 Substance	CAS No.	限值要求 Threshold Level	實施日期 Implementation date
No.1	2,4,6-TTBP 2,4,6-tris(三級丁基)苯酚 2,4,6-tris(tert-butyl) phenol	732-26-3	0.30%	即日起 Effective immediately
No.2	HCBD 六氯丁二烯 Hexachlorobutadiene	87-68-3	禁止使用 N.D.	即日起 Effective immediately
No.3	DecaBDE 十溴二苯醚 Decabromodiphenyl ether	1163-19-5	禁止使用 N.D.	即日起 Effective immediately
No.4	PIP (3:1) 異丙基化磷酸三苯酯 Phenol, isopropylated phosphate (3:1)	68937-41-7	禁止使用 N.D.	即日起 Effective immediately
No.5	PCTP 五氯苯硫酚 Pentachlorothiophenol	133-49-3	1%	即日起 Effective immediately

註：(Note):

當有害物質變更，以各國國際法規公告為準，供應商如有違反疑慮，請立即通知亞洲光學

When the hazardous substance changes to 更, the international regulatory announcement shall prevail. If the supplier has any concerns about violation, please notify Asia Optics immediately

當管制物質依據各法規有抵觸時，則採用較嚴格之標準。

When controlled substances are in conflict with various regulations, stricter standards are adopted.