

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. 全氟辛烷硫磺酸(PFOS) (Perfluorooctane sulfonates) 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))	
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 styrene 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)	
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) 、鈮 (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)	
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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	<ul style="list-style-type: none"> 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、電鍍點、觸點、鍍鋅、PVC穩定劑 Pigment, anti-corrosion surface treatment, optical glass, stabilizer, plating, fluorescent, electrode, solder, electric contact, contact point, zinc plating																																											
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4	六價鉻化合物 Chromium VI compounds	<ul style="list-style-type: none"> 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																																
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7	多氯聯苯類 (PCB類) 及指定替代品 Polychlorinated biphenyls(PCBs) and specific substitutes	<ul style="list-style-type: none"> 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																	
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8	多氯化萘 (至少含有3個氯原子)(PCN類) Polychlorinated naphthalenes (more than 3 chlorine atoms)	<ul style="list-style-type: none"> 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 characteristic, flame-resistant,waterresistant) insulator, flame retardant																	
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9	多氯三聯苯類 (PCT類) Polychlorinated terphenyls(PCTs)	<ul style="list-style-type: none"> 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																	
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10	短鏈氯化石蠟類 (C10~13) (SCCPs) Shortchain chlorinated paraffins(C10-13) (SCCPs)	<ul style="list-style-type: none"> 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																	
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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					
11	聚氯乙炔(PVC)以及聚氯乙炔混合物 Polyvinyl chloride (PVC) and PVC blends	<ul style="list-style-type: none"> • 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				
						聚氯乙炔 Polyvinyl chloride				CAS No.
						聚氯乙炔 (PVC) Polyvinyl chloride (PVC)				9002-86-2
						其他聚氯乙炔 Other Polyvinyl chlorides				—
PVC共聚物 PVC Copolymers				—						
12	多溴聯苯類 (PBB類) Polybrominated biphenyls(PBBs)	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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)	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.					
				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.						
				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 diphenyloxides				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)	<ul style="list-style-type: none"> 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																																												
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15	三丁基氧化錫 (TBTO) Tributyl tin oxide (TBTO)	<ul style="list-style-type: none"> 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																																												
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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 compounds	CAS No.			
						二丁基錫氧化物 Dibutyltin oxide	818-08-6			
						二丁基錫乙酸鹽 Dibutyltin diacetate	1067-33-0			
						二丁基錫二月桂酸酯 Dibutyltin dilaurate	77-58-7			
						二丁基錫馬來酸酯 Dibutyltin maleate	78-04-6			
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) Diocetyl tin compounds	CAS No.			
						氧化二辛基錫 Diocetyl Tin Oxide	870-08-6			
						二月桂酸二正辛基錫 Diocetyl tin dilaurate	3648-18-8			
						其它二辛基錫化合物 Other Diocetyl tin compounds	—			
						其它二辛基錫化合物 Other Diocetyl tin compounds	—			
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 Asbestos	CAS No.			
						石棉類 Asbestos	1332-21-4			
						陽起石 Actinolite	77536-66-4			
						鐵閃石 Amosite (Grunerite)	12172-73-5			
						直閃石 Anthophyllite	77536-67-5			
						溫石棉 Chrysotile	12001-29-5			
						青石棉 Crocidolite	12001-28-4			
						透閃石 Tremolite	77536-68-6			
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 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			
						(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.				

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20	鄰苯二甲酸鹽類 Phthalates Bis(2-ethylhexyl) phthalate	<ul style="list-style-type: none"> 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																								
		<ul style="list-style-type: none"> 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 對象: 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																								
		<ul style="list-style-type: none"> 美國特定州包材規範 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 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																								
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21	甲醛 Formaldehyde	<ul style="list-style-type: none"> 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 	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 Stereo cabinets, kiosk enclosures																								
		<ul style="list-style-type: none"> 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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	消耗臭氧層物質-續 Ozone depleting substances (continued)	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	661-97-2 422-86-6 74-97-5 75-61-6 353-59-3 75-63-8 124-73-2 56-23-5 71-55-6 74-83-9 74-96-4 106-94-5 2314-97-8 74-87-3 1868-53-7 1511-62-2 373-52-4 306-80-9 —																																																																		

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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) 替氟烷(HBFC-124 B1) Bromotetrafluoroethane (HBFC-124 B1) 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) 2-溴-1,1,1-三氟乙烷(HBFC-133 B1) Bromotrifluoroethane (HBFC-133 B1) 1,2-二溴氟乙烷(HBFC-141 B2) Dibromofluoroethane (HBFC-141 B2) 溴二氟乙烷(HBFC-142 B1) Bromodifluoroethane (HBFC-142 B1) 1-溴-2-氟乙烷(HBFC-151 B1) Bromofluoroethane (HBFC-151 B1) 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) 1-溴-1,1,2,3,3,3-六氟丙烷(HBFC-226 B1) Bromohexafluoropropane (HBFC-226 B1) 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) 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) 二溴三氟丙烷 (HBFC-243 B2) Dibromotrifluoropropane (HBFC-243 B2) 溴四氟丙烷 (HBFC-244 B1) Bromotetrafluoropropane (HBFC-244 B1) 三溴氟丙烷 (HBFC-251 B3) Tribromofluoropropane (HBFC-251 B3) 二溴二氟丙烷 (HBFC-252 B2) Dibromodifluoropropane (HBFC-252 B2) 溴三氟丙烷 (HBFC-253 B1) Bromotrifluoropropane (HBFC-253 B1) 二溴氟丙烷 (HBFC-261 B2) Dibromofluoropropane (HBFC-261 B2) 溴二氟丙烷 (HBFC-262 B1) Dibromofluoropropane (HBFC-261 B2) 溴氟丙烷 (HBFC-271 B1) Bromofluoropropane (HBFC-271 B1) 二氯氟甲烷 (HCFC-21) Dichlorofluoromethane (HCFC-21) 氯二氟甲烷 (HCFC-22) Chlorodifluoromethane (HCFC-22) 氯氟甲烷 (HCFC-31) Chlorofluoromethane (HCFC-31) 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) 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)		354-04-1 124-72-1 — 75-82-1 421-06-7 358-97-4 420-47-3 762-49-2 — — — — 431-78-7 2252-78-0 — — — — 460-88-8 — 70192-80-2 431-21-0 679-84-5 75372-14-4 460-25-3 421-46-5 51584-26-0 — 1871-72-3 75-43-4 75-45-6 593-70-4 134237-32-4 354-14-3 354-11-0 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)	<p>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)</p> <p>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)</p> <p>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 (HCFC-131a) 1,1,1-三氯-2-氟乙烷 (HCFC-131b) 1,1,1-Trichloro-2-fluoroethane (HCFC-131b)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p>		<p>34077-87-7 306-83-2 354-23-4 90454-18-5 812-04-4</p> <p>63938-10-3 2837-89-0 354-25-6</p> <p>27154-33-2; (134237-34-6) 359-28-4 811-95-0 2366-36-1</p> <p>25915-78-0 431-06-1 471-43-2 1649-08-7 1842-05-3</p> <p>1330-45-6 431-07-2 1330-45-6 75-88-7 421-04-5</p> <p>1717-00-6 (25167-88-8) 430-57-9 430-53-5 1717-00-6</p> <p>25497-29-4 338-65-8 75-68-3 338-64-7</p> <p>110587-14-9 762-50-5 1615-75-4</p> <p>134237-35-7, 29470-94-8, 422-26-4</p> <p>134237-36-8 422-49-1 422-30-0</p> <p>134237-37-9 422-52-6 422-50-4</p> <p>134237-38-0 422-54-8 422-53-7 422-51-7</p>	

產品禁止含有化學物質...續 Prohibited Chemical Substances in Products (continued)

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)	<p>二氯五氟丙烷 (HCFC-225) 2,2-二氯-1,1,1,1,3-五氟丙烷 (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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p>		<p>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</p> <p>134308-72-8 431-87-8</p> <p>134190-48-0 421-94-3</p> <p>134237-39-1 460-89-9</p> <p>134237-40-4 7125-83-9</p> <p>127564-83-4 425-94-5</p> <p>134237-41-5 460-92-4</p> <p>134190-49-1 666-27-3</p> <p>134237-42-6 460-63-9</p> <p>134237-43-7 7125-99-7 338-75-0 460-69-5</p> <p>134190-50-4 679-85-6 421-75-0</p>	

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)	<p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p>		<p>134190-51-5 818-99-5 421-41-0</p> <p>134190-52-6 819-00-1</p> <p>134237-44-8 460-35-5</p> <p>134237-45-9 7799-56-6 420-97-3</p> <p>134190-53-7 420-99-5 102738-79-4 421-02-3</p> <p>134190-54-8 420-44-0 430-55-7</p>	<p>134190-51-5 818-99-5 421-41-0</p> <p>134190-52-6 819-00-1</p> <p>134237-44-8 460-35-5</p> <p>134237-45-9 7799-56-6 420-97-3</p> <p>134190-53-7 420-99-5 102738-79-4 421-02-3</p> <p>134190-54-8 420-44-0 430-55-7</p>																
(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	<ul style="list-style-type: none"> 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																
<p>相關化學物質的代表性實例 Representative examples of relevant substance</p> <table border="1" data-bbox="311 1657 1492 1892"> <thead> <tr> <th data-bbox="311 1657 1189 1691">放射性物質 Radioactive substances</th> <th data-bbox="1189 1657 1492 1691">CAS No.</th> </tr> </thead> <tbody> <tr> <td data-bbox="311 1691 1189 1720">鈾-238 Uranium-238</td> <td data-bbox="1189 1691 1492 1720">7440-61-1</td> </tr> <tr> <td data-bbox="311 1720 1189 1749">氡 Radon</td> <td data-bbox="1189 1720 1492 1749">10043-92-2</td> </tr> <tr> <td data-bbox="311 1749 1189 1778">鐳-241 Americium-241</td> <td data-bbox="1189 1749 1492 1778">14596-10-2</td> </tr> <tr> <td data-bbox="311 1778 1189 1807">鈾-232 Thorium-232</td> <td data-bbox="1189 1778 1492 1807">7440-29-1</td> </tr> <tr> <td data-bbox="311 1807 1189 1836">銻-137 Cesium-137</td> <td data-bbox="1189 1807 1492 1836">10045-97-3</td> </tr> <tr> <td data-bbox="311 1836 1189 1865">鐳-90 Strontium-90</td> <td data-bbox="1189 1836 1492 1865">10098-97-2</td> </tr> <tr> <td data-bbox="311 1865 1189 1895">其他放射性物質 Other radioactive substances</td> <td data-bbox="1189 1865 1492 1895">-</td> </tr> </tbody> </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	鈾-232 Thorium-232	7440-29-1	銻-137 Cesium-137	10045-97-3	鐳-90 Strontium-90	10098-97-2	其他放射性物質 Other radioactive substances	-
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其他放射性物質 Other radioactive substances	-																				

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	全氟辛烷磺酸鹽 (PFOS) Perfluorooctane sulfonate(PFOS)	<ul style="list-style-type: none"> 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) 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

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鹽 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:	
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	-
全氟己烷磺酸 (PFHxS) 及其鹽類以及PFHxS相關物質 (十七氟辛烷磺酸(PFOS) 副產物) Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS related substances (by-product of heptadecafluorooctanesulfonic acid (PFOS))	-

24	全氟辛酸铵(PFOA)及其鹽類 Perfluorooctanoic acid (PFOA) and its salts.	<ul style="list-style-type: none"> 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 產品含有PFOA(及其鹽類) 濃度:大 於等於 25 ppb (25ppb=0.025ppm) The finished product contains PFOA (and its salts) concentration of 25ppb 產品中含單一或多種相關物質總 濃度:大於等於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)
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相關化學物質的代表性實例 Representative examples of relevant substance

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	

	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 氟羧酸鹽類(LCPFAC) Perfluoronanoic acid (PFAs) and its salts and (LCPFAC)	<ul style="list-style-type: none"> ECHA (REACH) 高度關注物質 ECHA SVHC 美國OEHHA 加州65號提案 Proposition 65 美國特定州 包材法案 TPCH (Toxics in Packaging Clearinghouse, TPCH) <p>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</p> <p>1.全氟己酸 (PFHxA)及其鹽類和相鄰物質 undecafluorohexanoic acid (PFHxA), its salts and related substances <ul style="list-style-type: none"> REACH附錄十七 · Annex XVII to Regulation (EC) No 1907/2006 美國特定州 包材法案 TPCH (Toxics in Packaging Clearinghouse, TPCH) </p> <p>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)</p> <p>2.全氟羧酸(C9-C14 PFCA) 及其鹽類 Perfluorocarboxylic acids and their salts Compounds <ul style="list-style-type: none"> REACH附錄十七 · Annex XVII to Regulation (EC) No 1907/2006 </p>	全部 All 包材相關參照(2) except packaging(2)	<ul style="list-style-type: none"> SVHCs 含 0.1% SVHCs contains 0.1% 含有需報告 "加州65警告標示" The product contains a California 65 warning label 	食品包裝、包材、地毯、皮革、塑膠、橡膠、紙張、牙線和炊具 Food packaging, packaging materials. Carpet, leather, plastic, rubber, paper, dental floss and cookware														
<table border="1"> <thead> <tr> <th data-bbox="293 663 684 770">主要法令或工業標準 Key Legal and Regulatory or Industry Standard / Agreement Citation</th> <th data-bbox="684 663 940 770">對象 Application(s)</th> <th data-bbox="940 663 1195 770">最大濃度值 Threshold Level</th> <th data-bbox="1195 663 1536 770">用法示例 Examples of Use</th> </tr> </thead> <tbody> <tr> <td data-bbox="293 770 684 1099">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</td> <td data-bbox="684 770 940 1099">全部 All</td> <td data-bbox="940 770 1195 1099">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</td> <td data-bbox="1195 770 1536 1099">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</td> </tr> </tbody> </table>						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						
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<table border="1"> <thead> <tr> <th data-bbox="293 1137 1195 1176">全氟羧酸(C9-C14 PFCA) 及其鹽類化合物 Perfluorocarboxylic acids and their salts Compounds :</th> <th data-bbox="1195 1137 1536 1176">CAS No.</th> </tr> </thead> <tbody> <tr> <td data-bbox="293 1176 1195 1214">C9-PFCA 全氟壬酸 Perfluorononanoic Acid</td> <td data-bbox="1195 1176 1536 1214">PFNA 375-95-1</td> </tr> <tr> <td data-bbox="293 1214 1195 1252">C10-PFCA 全氟癸酸 Nonadecafluorodecanoic Acid</td> <td data-bbox="1195 1214 1536 1252">PFDA 335-76-2</td> </tr> <tr> <td data-bbox="293 1252 1195 1290">C11-PFCA 全氟十一烷酸 Henicosafluoroundecanoic Acid</td> <td data-bbox="1195 1252 1536 1290">PFUnDA 2058-94-8</td> </tr> <tr> <td data-bbox="293 1290 1195 1328">C12-PFCA 全氟十二酸 Tricosfluorododecanoic Acid</td> <td data-bbox="1195 1290 1536 1328">PFDoDA 307-55-1</td> </tr> <tr> <td data-bbox="293 1328 1195 1366">C13-PFCA 全氟十三酸 Pentacosfluorotridecanoic Acid</td> <td data-bbox="1195 1328 1536 1366">PFTrDA 72629-94-8</td> </tr> <tr> <td data-bbox="293 1366 1195 1404">C14-PFCA 全氟十四酸 Heptacosfluorotetradecanoic Acid</td> <td data-bbox="1195 1366 1536 1404">PFTDA 376-06-7</td> </tr> </tbody> </table> <p>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</p>						全氟羧酸(C9-C14 PFCA) 及其鹽類化合物 Perfluorocarboxylic acids and their salts Compounds :	CAS No.	C9-PFCA 全氟壬酸 Perfluorononanoic 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
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C14-PFCA 全氟十四酸 Heptacosfluorotetradecanoic Acid	PFTDA 376-06-7																		
25	鹵素(溴和氯) Halogen free (Bromine and Chlorine)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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														

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								
26 多環芳族碳氫化合物 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(Ε)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) Chrysen (CHR)			218-01-9				
					苯並(B)熾蒽(BbFA) Benzo[b]fluoranthene (BbFA)			205-99-2				
					苯並(BjFA) Benzo[j]fluoranthene (BjFA)			205-82-3				
					苯並(K)熾蒽(BkFA) Benzo[k]fluoranthene (BkFA)			207-08-9				
1,2: 5,6-二苯並蒽(DBAhA) Dibenzo[a,h]anthracene (DBAhA)			53-70-3									
27 苯乙烯和2,4,4-三甲基戊烯的反應物 (BNST) Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene (BNST)	加拿大禁止特定有毒物質法規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應物 (BNST) Benzenamine,N-phenyl-,reaction products with styrene 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) Hexabromocyclododecane (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	成形成品中含有限制 0.01wt% by weight of the Products(1,00ppm)	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			
									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									

產品禁止含有化學物質...續 Prohibited Chemical Substances in Products (continued)

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	
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 铍铜的电气性结合用途 (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		

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	作為豁免對象的電池 Exempted battery	法律法規依據 Corresponding regulation
鎘 Cadmium	所有鎳鎘電池 All nickel-cadmium batteries	無 Nothing	<ul style="list-style-type: none"> 韓國《品質經營及工業產品安全管理法》 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) EU電池指令2006/66/EC EU Batteries Directive (2006/66/EC)
	錳電池、鹼錳電池、鎳氫(Ni-MH)蓄電池中鎘的重量比大於0.001%(10PPM)的電池 Zinc-carbon batteries, alkaline manganese batteries, and nickel-metal hydride(Ni-MH) secondary batteries that contain cadmium more than 0.001%(10ppm) by weight	鈕扣電池 Button cells	
	除上述電池外，鎘的重量比超過0.002%(20PPM)的電池 Batteries, other than the batteries listed above, that contain cadmium more than 0.002%(20ppm) by weight	下述用途的電池 • 包括緊急燈在內的緊急報警系統 • 醫療器械 Batteries used for the following purposes: - Emergency and alarm systems, including emergency lighting - Medical equipment	
鉛 Lead	錳電池中，鉛的重量比為0.1%(1000PPM)以上的電池 Zinc-carbon batteries that contain lead 0.1% or more by weight	無 Nothing	<ul style="list-style-type: none"> 巴西電池限制國家環境審議會第401號決議 Brazilian Batteries Regulation National Environmental 中國的電池中有害物質限量國家標準(GB24427、GB24428) Chinese National Standards regarding the limit of harmful substances in batteries (GB24427,GB24428) 韓國《品質經營及工業產品安全管理法》 Korea "Quality Management and Industrial Products Safety Management Enforcement Ordinances"
	鹼錳電池中，鉛的重量比大於0.004%(40PPM)的電池 Alkaline manganese batteries that contain lead more than 0.004% by weight	無 Nothing	
	鎳氫 (Ni-MH)蓄電池中鉛的重量比大於0.4%(4000PPM)的電池 Nickel-metal hydride (Ni-MH) secondary batteries that contain lead more than 0.4% by weight	鈕扣電池 Button cells	
汞 Mercury	電池中汞的重量比大於0.0005%(5 PPM)的所有電池 All batteries that contain mercury more than 0.0005% by weight	無 Nothing	<ul style="list-style-type: none"> 韓國《品質經營及工業產品安全管理法》 Korea "Quality Management and Industrial Products Safety Management Enforcement Ordinances" EU電池指令2006/66/EC EU Batteries Directive (2006/66/EC) 台灣廢棄物清理法（重金屬規定） Taiwan Waste Disposal Act(Regulation on heavy metal)
	錳電池、鹼錳電池、鎳氫(Ni-MH)蓄電池中電池中汞的重量比大於0.0001%(1 PPM)的電池 Zinc-carbon batteries, alkaline manganese batteries, and nickel-metal hydride(Ni-MH) secondary batteries that contain mercury more than 0.0001% by weight	鈕扣電池 Button cells	

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-Instytut 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-Instytut 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 (注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) (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)(1) (Hg)	直線型磷酸鹽燈管, 其管徑 > 28 mm (例如T10 and T12): 10 mg Mercury in other fluorescent lamps not exceeding (per lamp):Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	到期日: 2012/4/13 Expires on 2012/4/13	
2(b)(2) (Hg)	非直線型磷酸鹽燈管 (所有管徑all diameters): 15 mg Non-linear halophosphate lamps (all diameters): 15 mg	到期日: 2016/4/13 Expires on 2016/4/13	
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 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 Expires on 2027 / 2 / 24	
2(b)(4-III) (Hg)	緊急照明燈: 15 mg Emergency lamps: 15 mg	到期日 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		
3(b) (Hg)	中等長度 (> 500 mm and ≤ 1 500 mm): 5mg Medium length (> 500 mm and ≤ 1 500 mm) :5mg	到期日 Expires on 2025 / 2 / 24	
3(c) (Hg)	長管燈 (> 1,500mm) : 13mg Long length (> 1 500 mm) :13mg		

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(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 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-spectral output to be in the ultraviolet spectrum: up to 15 mg mercury may be used per lamp	到期日 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 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 Expires on 2023 / 2 /24	
4(b)-II (Hg)	Ra > 60, 155W<P≤405W : 40mg		
4(b)-III (Hg)	Ra > 60, P>405W : 40mg		
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 (燈管功率) ≤ 155 W : 20mg P ≤ 155 W: 20mg	到期日 Expires on 2027 / 2 /24	
4(c)-II (Hg)	155W < P ≤ 405 W : 25mg		
4(c)-III (Hg)	P>405W : 25mg		
4(d)	高壓汞 (蒸氣) 燈 (HPMV) 中所含的汞 Mercury in High Pressure Mercury (vapour) lamps (HPMV)	到期日 Expires on : 2015/ 4/13	
4(e) (Hg)	金屬鹵化燈 (MH) 中所含的汞 Mercury in metal halide lamps (MH)	到期日 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 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 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		
4(g) (Hg)	汞用於標誌、裝飾或建築和專業照明燈具和使用於手工製作的光藝術品時, 其中發光放電管的汞含量應限於如下: (a)於戶外與室內溫度低於20°C中使用時, 每個燈管20 mg, 每增加1公分燈管可增加0.3mg汞, 但不可以超過80 mg (b)於其他室內使用時, 每個燈管15 mg, 每增加1公分燈管可增加0.24mg汞, 但不可以超過80 mg When mercury is used in sign, decorative or architectural and professional lighting fixtures and in handmade light artwork, the mercury content of light-emitting discharge tubes shall be limited to the following: (a) When used in outdoor and indoor temperatures below 20°C, each lamp is 20 mg, and 0.3 mg of mercury can be added for each additional 1 cm of lamp, but cannot exceed 80 mg (b) For other indoor use, each lamp is 15 mg, and 0.24 mg of mercury can be added for each additional 1 cm lamp, but cannot exceed 80 mg	到期日 Expires on 2018 / 12 /31	
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 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% Lead in glass of fluorescent tubes not exceeding 0,2 % by Weight	到期日 Expires on: 2024/12/31 : Cat 5 -RoHS Pack 24 ^(*) recommendations	
6(a) (Pb)	鉛用於加工用途之鋼材及鍍鋅鋼的合金元素之一, 含量最高可達0.35% (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	屆期 Expired	到期日 Expires on : 2023/7/21 : 8 in vitro diagnostic medical devices 2024/7/21 : 9 ,11 - RoHS Pack 22 ^(*) recommendations
6(a)-I (Pb)	鉛用於加工用途之鋼材, 含量最高可達0.35% Lead as an alloying element in steel for machining purposes containing up to 0,35 %	到期日 Expires on : 2024/7/21 -RoHS Pack 22 ^(*) recommendations	

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(a)-II (Pb)	鉛用於批量熱浸鍍鋅鋼材，含鉛量最高可達0.2% Lead in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	到期日 Expires on : 2026/7/21 RoHS Pack 22 ^(*) recommendations	
6(b) (Pb)	鉛用於鋁合金，並為其元素之一，含量最高可達0.4% 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)	屆期 Expired	到期日 Expires on : 2023/7/21 : 主要8 2024/7/21 : 主要9、11 -RoHS Pack 22 ^(*) recommendations
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% Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	撤銷，提供12個月過渡期 Expires 12 months after the decision for all categories -RoHS Pack 22 ^(*) recommendations	
6(b)-II (Pb)	鉛用於加工用途之鋁合金，含量最高可達0.4% Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	撤銷，提供18個月過渡期 Expires 18 months after the decision for all categories -RoHS Pack 22 ^(*) recommendations	
6(b)-III (Pb)	來源為回收含鉛鋁廢料時，鉛作為鋁合金中的合金元素，含鉛量不超過 0.3% Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling	到期日 Expires : 2026 /7/21 全類別 All categories -RoHS Pack 22 ^(*) recommendations	
6(b) (IV) (Pb)	鉛用於加工用途之鋁合金，用於第1類 EEE (大型家用電器) 的燃氣閥中的鉛含量不超過0.4% Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight in gas valves applied in category 1 EEE (large household appliances)	到期日 Expires on: 2024/12/31 : Cat 1 -RoHS Pack 22 ^(*) recommendations	
6(c) (Pb)	銅合金所含的鉛，最高可達4% Copper alloy containing up to 4 % lead by weight	到期日 Expires : 2026 /7/21 全類別 All categories -RoHS Pack 22 ^(*) recommendations	
7(a) (Pb)	高熔點錫鉛的鉛(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 : 2024/7/21 全類別 (不含附錄III 第24 項的應用) All categories (except applications covered by point 24 of this Annex) -RoHS Pack 22 ^(*) recommendations	
	高熔點錫鉛的鉛(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 燒結的芯片連接材料應 >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) 的焊球 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	到期日 Expires on : 2026/7/21 全類別 (不含附錄III 第24 項的應用) All categories (except applications covered by point 24 of this Annex) -RoHS Pack 22 ^(*) recommendations	
	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 overmoldings (> 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		

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
7(b) (Pb)	於伺服器、儲存裝置或儲存陣列系統裝置中使用的錐錫，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錐錫可含鉛。 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(piezoelectric 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. piezoelectric devices, or in a glass or ceramic matrix compound	到期日 Expires on : 2024/7/21 全類別All categories -RoHS Pack 22 ⁽¹⁾ recommendations	
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 : 2026/7/21 所有類別(需排除7(c)-I 和7(c)-IV 應用類別) Does not apply to applications covered by point 7(c)-I and 7(c)-IV of this Annex. Expires on 21 July 2026 for all categories -RoHS Pack 22 ⁽¹⁾ recommendations	
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	
7(c)-V (Pb)	電子電氣元件中具有以下功能的玻璃或玻璃基質化合物中含有的鉛(例如高壓二極管玻璃珠、陶瓷、金屬和/或玻璃部件之間的氣密密封、用作油墨中電阻材料)等： 1) 基於硼酸鉛鋅或硼矽酸鉛玻璃體的高壓二極管玻璃珠和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 < 500°C 的工藝參數窗口中結合 $10^{13.3}$ dPas 的粘度(所謂的“玻璃化轉變溫度”)進行粘合 4) 用作油墨等電阻材料，電阻率範圍從1 Ohms/square到1 Mega Ohms/square，不包括微調電位器** 5) 用於微通道板(MCP)、通道電子倍增器(CEM)和電阻玻璃產品(RGP)的化學改性玻璃表面。 Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils the following functions: 1) protection and electrical insulation in glass beads of high voltage diodes and glass layers for wafer on the basis of a lead-zinc-borate or a lead-silica-borate glass body,* 2) for hermetic sealings between ceramic, metal and/or glass parts 3) for bonding purposes in a process parameter window for < 500°C combined with a viscosity of $10^{13.3}$ dPas (so called “glass-transition temperature”) 4) used as resistance materials such as ink, with a resistivity range from 1 Ohms/square to 1 Mega Ohms/square, excluding trimmer potentiometers** 5) used in chemically modified glass surfaces for Microchannel Plates (MCPs), Channel Electron Multipliers (CEMs) and Resistive Glass Products (RGPs).	到期日 Expires on : 2026/7/21 全類別All categories -RoHS Pack 22 ⁽¹⁾ recommendations	
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)	到期日 Expires on : 2026/7/21 全類別All categories - RoHS Pack 22 ⁽¹⁾ recommendations	

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
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)-1)	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
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(商討中) -Pack 23	
9 (Cr6+)	六價鉻用於吸收式冷藏櫃碳鋼冷卻系統中的防腐蝕劑, 其重量佔冷卻液0.75% Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	(移至 9(a)-I, II) (Shifted to 9(a)-I, II)	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
9(a)-I (Cr6+)	正常運行狀態下, 平均功耗小於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) 的碳鋼冷卻系統中所用作防鏽劑, 所用量不超過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卻系統中所用作防鏽劑, 所用量不超過0.75%的六價鉻 ·正常運行狀態下, 平均功耗大於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, 其重量不超過冷卻溶液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
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	

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
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 2024/7/21 : 9,11
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錒錫，若此錒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，以完成電力連結的錒錫可含鉛。 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
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，以完成電力連結的錒錫可含鉛。 - 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	

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
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(a) (Pb)	當放電燈被用作二氮化合物列印、平版印刷、捕蟲器,以及含磷化學和含磷食物加工過的專業燈時(例如SM((Sr,Ba)2MgSi2O7:Pb)S),放電燈中的螢光粉觸媒劑的鉛(鉛含量1%以下) Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb)	到期日:2011/1/1 Expires on 2011/1/1	
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 control instruments, and Cat 11 -RoHS Pack 24 ^(*) recommendations	
18(b)-II(Pb) 18(b)-I(Pb)	新增項目18(b)-II : 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。 註: Pack 24 2022/2/25 建議將豁免18(b)-I (附件III) 與豁免34 (附件IV) 歸為新條款(18(b)-II)。以18(b)-II 取代18(b)-I)。 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版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
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	表單編號: E8109-02-1.3

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
23 (Pb)	鉛用於細間距零件之表面處理，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	
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	18個月過渡期 18-month transition period -RoHS Pack 24 ^(*) recommendations	
24 (a) (Pb)	新增24(a) 用於焊接通孔盤狀和/或平面陣列陶瓷多層電容器的合金中的鉛： I) 對於元件以機械方式安裝（例如通過螺栓、夾子或螺釘）或通過選擇性焊接/焊接工藝粘且元件溫度不超過 150°C 的應用，不超過 50%(重量) II) 使用鉛≥85%(重量)的高熔點焊料，適用於使用溫度≥150°C的高溫工藝(如焊料回流、焊接)安裝元件或元件額定工作溫度≥150°C的情況 New item :24(a) Lead in alloys used for soldering to through hole discoidal and/or planar array ceramic multilayer capacitors： I) Not exceeding 50% by weight for applications where the components are mechanically mounted (e.g. by bolts, clips or screws) or bonded by a selective soldering / welding process and where the component will not exceed a temperature of 150°C. II) In high melting point solders containing ≥ 85 % lead by weight for cases where the components are mounted using an elevated temperature process (e.g. solder reflow, welding) at a temperature of ≥ 150°C or where the component is rated to operate at a temperature of ≥ 150°C"	到期日 Expires on: 2026/ 7/21 : Cat 1~11 -RoHS Pack 24 ^(*) recommendations	
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 other 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	

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
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/機械錫料中的鎘合金。 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
31 (Pb)	無汞平板螢光燈(例如用於液晶螢幕、設計或工業照明)中的錫料所含的鉛。 Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	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
32 (Pb)	氬及氪雷射管中，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 ⁽¹⁾ 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 ⁽¹⁾ 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
38 (Cd)	用氧化鋁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
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)	商討中 Under discussion	
40 (Cd)	專業音響設備中，類比光耦合器之光阻內,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	

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
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 1-7、10 和 11	到期日 Expires on : 2021/7/21 : 8 和 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
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) (Cr6+)	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鉛酸鉍。 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

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
Neither 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規則的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訊息交流中心 (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
鉞鉻紅 Lead chromate molybdate sulphate red					12656-85-8
顏料黃-34 Lead sulfchromate yellow					1344-37-2
鉻酸鈉 Sodium chromate					7775-11-3
重鉻酸鈉 Sodium dichromate					10588-01-9
鉻酸銣 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 hydroxyoctaoxidizincatedichromate					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
鉞鉻紅 Lead chromate molybdate sulphate red					12656-85-8
鹼式碳酸鉛 (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 磷酸鉛 Lead phosphate 硒化鉛 Lead selenide 氧化鉛(IV) Lead (IV) oxide 氧化鉛(II、IV) Lead (II,IV) oxide 硫化鉛(II) Lead (II) sulfide 氧化鉛(II) Lead (II) oxide 鹼式碳酸鉛(II) Lead (II) carbonate basic 氫氧碳化鉛 Lead hydroxidcarbonate 砷酸氫鉛 Lead hydrogen arsenate 磷酸鉛(II) Lead (II) phosphate 顏料黃-34 Lead sulfochromate yellow 鈦酸鉛(II) Lead (II) titanate 硫酸鉛 Lead sulfate, sulphuric acid, lead salt 三鹼式硫酸鉛 Lead sulphate, tribasic 硬脂酸鉛 Lead stearate 疊氮化鉛 Lead azide 苦味酸鉛 Lead dipicrate 收斂酸鉛 Lead styphnate 其他鉛化合物 Other lead compounds 汞/汞化合物 Mercury /Mercury Compounds 汞 Mercury 氯化汞 (2+) Mercuric chloride 氯化汞(II) Mercury (II) chloride 硫酸汞 Mercuric sulfate 硝酸汞 (2+) Mercuric nitrate 氧化汞(II) Mercuric (II) oxide 硫化汞 (2+) Mercuric sulfide 其他汞化合物 Other mercury compounds		6080-56-4 7446-27-7 12069-00-0 1309-60-0 1314-41-6 1314-87-0 1317-36-8 1319-46-6 1344-36-1 7784-40-9 7446-27-7 1344-37-2 12060-00-3 15739-80-7 12202-17-4 1072-35-1 13424-46-9 6477-64-1 15245-44-0 — CAS No. 7439-97-6 33631-63-9 7487-94-7 7783-35-9 10045-94-0 21908-53-2 1344-48-5 —	
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 相關化學物質的代表性實例 Representative examples of relevant substance	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 CAS No. 1336-36-3 76253-60-6 81161-70-8 99688-47-8

包裝材料的禁止含有化學物質...續 Prohibited Chemical Substances in Packaging Materials(continued)

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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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			—							
7	三丁基氧化錫 (TBTO) Tributyl tin oxide (TBTO)	<ul style="list-style-type: none"> 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																
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其它二丁基錫化合物 Other dibutyltin compounds	—																				
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																
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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																
						相關化學物質的代表性實例 Representative examples of relevant substance															
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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																																														
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		(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.																																																	
12	聚氯乙烯(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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包裝材料的禁止含有化學物質...續 Prohibited Chemical Substances in Packaging Materials(continued)

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)	<ul style="list-style-type: none"> 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					
						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.			
	二甲基富馬酸鹽 Dimethyl fumarate (DMF)	624-49-7								
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)	<ul style="list-style-type: none"> 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					
						相關化學物質的代表性實例 Representative examples of relevant substance				
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	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)	3846-71-7								
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	<ul style="list-style-type: none"> 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	成形品與包裝材料種類的 0.01wt% by weight of the packaging item (100ppm)	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					
						相關化學物質的代表性實例 Representative examples of relevant substance				
		<ul style="list-style-type: none"> 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					
						HBCDD及其所有主要非對應異構體 HBCDD and all Major Diastereoisomers				
						六溴環十二烷(HBCDD) Hexabromocyclododecane (HBCDD)				
						α-六溴環十二烷 α-hexabromocyclododecane				
						β-六溴環十二烷 β-hexabromocyclododecane				
						γ-六溴環十二烷 γ-hexabromocyclododecane				
						rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-六溴環十二烷 rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane				
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						(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-六溴環十二烷 (1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane				
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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																					
16	鄰苯二甲酸酯類 (phthalates)	<ul style="list-style-type: none"> 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) 包含長鏈烷基氟羧酸鹽類(LCPFAC) Perfluorinated and Polyfluoroalkyl Substances (PFAS) Contains long chain alkyl fluorocarboxylates (LCPFAC)	<ul style="list-style-type: none"> 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																					
		<ul style="list-style-type: none"> 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)																						
		<ul style="list-style-type: none"> 斯德哥爾摩公約 Stockholm Convention 	全部 All	有意添加(E8109-02) Intentionally																						
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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 repellent, 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													
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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 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												
		· 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)													

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、鈷鉍鐵礦、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)、鉍(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 鉍 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

3.2 紅磷及其他磷系阻燃劑 Red phosphorous and phosphorous compounds

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	磷及其化合物 Red phosphorous and phosphorous compounds	REACH規則(EC)No.1907/2006的附錄17與高關注物質與佛蒙特州S81的管控要求,及一些客人要求 SVHCs in REACH and ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Vermont S 81 and customers requirements	阻燃劑	1.紅磷:ND 2.總磷:1000PPM	阻燃劑
相關化學物質的代表性實例 Representative examples of relevant substance					
	磷及其機磷酸鹽類(中文名稱)		對象 Application(s)	最大濃度值 Threshold Level	CAS No.
	白/黃磷 white phosphorous		阻燃劑	ND	12185-10-3
	紅磷 Red phosphorous		阻燃劑	ND	7723-14-0
	磷酸三(2-氯乙基)酯 (TCEP) Tris(2-chloroethyl) phosphate		有機磷酸鹽類阻燃劑	1000PPM	115-96-8
	磷酸三(1-氯-2-丙基)酯 (TCPP) Tris(1-chloro-2-propyl)phosphate		有機磷酸鹽類阻燃劑	1000PPM	13674-84-5
	磷酸三(二甲苯)酯;磷酸二甲酚酯(TXP) Trixylenyl phosphate		有機磷酸鹽類阻燃劑	1000PPM	25155-23-1
	磷酸三(1,3-二氯異丙基)酯 (TDCP) 1,3-Dichloro-2-propanol phosphate		有機磷酸鹽類阻燃劑	1000PPM	13674-87-8
	磷酸三苯酯 (TPP) Triphenyl phosphate		有機磷酸鹽類阻燃劑	1000PPM	115-86-6
	三(2-溴丙基)-磷酸酯(TDBPP) Tris(2,3-dibromopropyl)phosphate		有機磷酸鹽類阻燃劑	1000PPM	126-72-7
	三(1-氮丙啶基)氧化磷 (TEPA) Tri-1-aziridinylphosphine oxide		有機磷酸鹽類阻燃劑	1000PPM	545-55-1

3.3 削減物質 Reduction of 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

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/gnoc/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/gnoc/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 2,4,6-參(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.