

Environment Hazardous Substances Compliance

Taiwan Semiconductor hereby declare that all of our products and packaging materials are compliant on RoHS directives and do not contain any of the hazardous substances except for currently exempted RoHS directive or impurities listed on Table 1. Hazardous Substance List

Taiwan Semiconductor is committed in conforming to our corporate responsibilities for the protection of the environment.

Table 1. Hazardous Substance List

No.	Substance Name	CAS Number	Targets	Limit (ppm)
1.RoHS directive (2011/65/EU)				
1.1	Cadmium and cadmium compounds 鎘以及鎘化合物	7440-43-9	Plastics , Ink 塑膠 , 油墨	100
			Solders 錫料	20
			Other all applications uses 其他所有用途	100
1.2	Lead and lead compounds 鉛以及鉛化合物 (Note1)	7439-92-1	Plastics , Ink 塑膠 , 油墨	100
			other all applications uses 其他所有用途	1000
1.3	Mercury and mercury compounds 汞以及汞化合物	7439-97-6	All uses 所有用途	1000
1.4	Hexavalent chromium compounds 六價鉻化合物	1333-82-0	All uses 所有用途	1000
1.5	Polybrominated biphenyls (PBB) 多溴聯苯	-	All uses 所有用途	1000
1.6	Polybrominated diphenylethers (PBDE) (including decabromodiphenyl ether [DecaBDE]) 20 多溴聯苯醚 包含十溴聯苯醚	-	All uses 所有用途	1000
2.RoHS directive(2015/863/EU)				
2.1	Bis (2- ethylhexyl) phthalate (DEHP) 鄰苯二甲酸二(2-乙基己基)酯	117-81-7	All uses 所有用途	1000

No.	Substance Name	CAS Number	Targets	Limit (ppm)
2.2	Butyl benzyl phthalate (BBP) 鄰苯二甲酸甲苯基丁酯	85-68-7	All uses 所有用途	1000
2.3	Dibutyl phthalate (DBP) 鄰苯二甲酸二丁酯	84-74-2	All uses 所有用途	1000
2.4	Diisobutyl phthalate (DIBP) 鄰苯二甲酸二異丁酯	84-69-5	All uses 所有用途	1000
3.PFOA/PFOS directive (2006/122/EC)				
3.1	Perfluorooctanoic acid (PFOA) 全氟辛酸	335-67-1	All uses 所有用途	1000
3.2	Perfluorooctane sulfonates (PFOS) 全氟辛烷硫磺酸	2795-39-3	All uses 所有用途	1000
4.SONY SS-00259 22nd edition				
4.1	Cadmium and cadmium compounds 鎘以及鎘化合物	7440-43-9	Plastics , Ink 塑膠 , 油墨	100
			Solders 錫料	20
			other all applications uses 其他所有用途	100
4.2	Lead and lead compounds 鉛以及鉛化合物 (Note1)	7439-92-1	Plastics , Ink 塑膠 , 油墨	100
			other all applications uses 其他所有用途	1000
4.3	Mercury and mercury compounds 汞以及汞化合物	7439-97-6	All uses 所有用途	1000
4.4	Hexavalent chromium compounds 六價鉻化合物	1333-82-0	All uses 所有用途	1000
4.5	Polybrominated biphenyls (PBB) 多溴聯苯	-	All uses 所有用途	1000
4.6	Polybrominated diphenylethers (PBDE) (including decabromodiphenyl ether [DecaBDE]) 多溴聯苯醚包含十溴聯苯醚	-	All uses 所有用途	1000
4.7	Hexabromocyclododecane (HBCDD) 六溴環十二烷	25637-99-4	All uses 所有用途	100
4.8	Other brominated organic compounds 其他有機溴化合物	-	Plastics 塑膠	900

No.	Substance Name	CAS Number	Targets	Limit (ppm)
4.9	Polychlorinated biphenyls (PCB) 多氯聯苯	1336-36-3	All uses 所有用途	Banned 禁用
4.10	Polychlorinated naphthalenes (PCN) 多氯化萘	70776-03-3	All uses 所有用途	Banned 禁用
4.11	Polychlorinated terphenyls (PCT) 多氯三聯苯	61788-33-8	All uses 所有用途	Banned 禁用
4.12	Short-chain chlorinated paraffins (SCCP) 短鍊型氯代烷烴	-	All uses 所有用途	1000
4.13	Tris(2-chloroethyl) phosphate (TCEP) 磷酸三(2-氯乙基)酯	115-96-8	Flame retardants use in plastics and resins. 塑膠,樹脂阻燃劑	1000
4.14	Tris(2-chloro-1 methylethyl) phosphate (TCPP) 磷酸三(2-氯丙基)酯	13674-84-5	Flame retardants use in plastics and resins. 塑膠,樹脂阻燃劑	1000
4.15	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP) 磷酸三(2,3-二-氯丙基)酯	13674-87-8	Flame retardants use in plastics and resins. 塑膠,樹脂阻燃劑	1000
4.16	Perchlorates 高氯酸鹽	-	All uses 所有用途	0.006
4.17	Polyvinyl chloride (PVC) and PVC blends 聚氯乙烯以及聚氯乙烯混合物	9002-86-2	All uses 所有用途	1000
4.18	Other chlorinated organic compounds 其他有機氯化物	-	Plastics 塑膠	900
4.19	Hydrofluorocarbon (HFC) 氫氟碳化合物, Perfluorocarbon (PFC) 全氟化碳 Sulfur hexafluoride(SF6) 六氟化硫	- 75-73-0 2551-62-4	All uses 所有用途	Banned 禁用
4.20	Ozone depleting substances (ODS) 臭氧層破壞物質	-	All uses 所有用途	Banned 禁用
4.21	Hydrochlorofluorocarbons (HCFC) 氫氯氟烴	-	All uses 所有用途	Banned 禁用
4.22	Perfluorooctane sulfonates (PFOS) 全氟辛烷硫磺酸	2795-39-3	All uses 所有用途	1000
4.23	Perfluorooctanoic acid (PFOA) 全氟辛酸	335-67-1	All uses 所有用途	1000
4.24	Trisubstituted organotin compounds (including tributyltin (TBT) 三丁基錫化合物	-	All uses 所有用途	Banned 禁用

No.	Substance Name	CAS Number	Targets	Limit (ppm)
4.25	Dibutyltin (DBT) compounds 二丁基錫化合物	-	All uses 所有用途	1000
4.26	Dioctyltin (DOT) compounds 二辛基錫化合物	-	All uses 所有用途	1000
4.27	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetra decanoate (DOTE) 硫代甘醇酸異辛酯二正辛基錫	15571-58-1	All uses 所有用途	1000
4.28	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetra decanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl- 7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) 以硫代甘醇酸異辛酯二正辛基錫和甲基錫三(巰基乙酸異 辛酯)為組成要素的物質 (以 DOTE 和 MOTE 為組成要素 的物質)	-	All uses 所有用途	1000
4.29	Beryllium oxide 氧化鈹	1304-56-9	All uses 所有用途	Banned 禁用
4.30	Beryllium copper 鈹青銅	-	All uses 所有用途	Banned 禁用
4.31	Cobalt dichloride 二氯化鈷	7646-79-9	All uses 所有用途	Banned 禁用
4.32	Diarsenic trioxide 三氧化二砷	1327-53-3	All uses 所有用途 (Excluding Wafer) 晶圓除外	1000
4.33	Diarsenic pentaoxide 五氧化二砷	1303-28-2	All uses 所有用途 (Excluding Wafer) 晶圓除外	1000
4.34	Bis (2- ethylhexyl) phthalate (DEHP) 鄰苯二甲酸二(2-乙基己基)酯	117-81-7	All uses 所有用途	1000
4.35	Dibutyl phthalate (DBP) 鄰苯二甲酸二丁酯	84-74-2	All uses 所有用途	1000
4.36	Butyl benzyl phthalate (BBP) 鄰苯二甲酸甲苯基丁酯	85-68-7	All uses 所有用途	1000
4.37	Diisobutyl phthalate (DIBP) 鄰苯二甲酸二異丁酯	84-69-5	All uses 所有用途	1000
4.38	Di-isononyl phthalate (DINP) 鄰苯二甲酸二異壬酯	28553-12-0 68515-48-0	All uses 所有用途	1000
4.39	Di-isodecyl phthalate (DIDP) 鄰苯二甲酸二異癸酯	26761-40-0 68515-49-1	All uses 所有用途	1000

No.	Substance Name	CAS Number	Targets	Limit (ppm)
4.40	Di-n-octyl phthalate (DNOP) 鄰苯二甲酸二異辛酯	117-84-0	All uses 所有用途	1000
4.41	Dihexyl phthalate (DNHP) 鄰苯二甲酸二乙酯	84-75-3	All uses 所有用途	1000
4.42	(1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) 鄰苯二甲酸二(C6-8 支鏈)烷基酯富 C7	71888-89-6	All uses 所有用途	1000
4.43	(1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters) (DHNUP) 鄰苯二甲酸二(C7-11 支鏈與直鏈)烷基酯	68515-42-4	All uses 所有用途	1000
4.44	Bis(2-methoxyethyl) phthalate (DMEP) 鄰苯二甲酸二甲氧乙酯	117-82-8	All uses 所有用途	1000
4.45	Diisopentylphthalate (DIPP) 鄰苯二甲酸二異戊酯	605-50-5	All uses 所有用途	1000
4.46	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear 支鏈與直鏈的鄰苯二甲酸二戊酯	84777-06-0	All uses 所有用途	1000
4.47	N-pentyl-isopentylphthalate 鄰苯二甲酸正戊基異戊基酯	776297-69-9	All uses 所有用途	1000
4.48	Dipentyl phthalate (DPP) 鄰苯二甲酸二戊酯	131-18-0	All uses 所有用途	1000
4.49	Asbestos 石棉	1332-21-4 132207-32-0 132207-33-1	All uses 所有用途	Banned 禁用
4.50	Specific azo compounds 特定偶氮化合物	-	All uses 所有用途	30
4.51	Formaldehyde 甲醛	50-00-0	All uses 所有用途	Banned 禁用
4.52	1,2-Benzenedicarboxylic acid, dihexylester, branched and linear 支鏈和直鏈鄰苯二甲酸二庚酯	68515-50-4	All uses 所有用途	1000
4.53	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) 2-(2'-羥基-3',5'-二叔戊基苯基)苯並三唑	25973-55-1	All uses 所有用途	Banned 禁用
4.54	Specific benzotriazole 特定苯並三氮唑	3846-71-7	All uses 所有用途	Banned 禁用
4.55	Dimethyl fumarate (DMF) 富馬酸二甲酯	624-49-7	All uses 所有用途	0.1

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No.	Substance Name	CAS Number	Targets	Limit (ppm)
4.56	Polycyclic aromatic hydrocarbons(PAHs) 多環芳香烴化合物	-	Plastics 塑膠	0.1
4.57	Boric acid, specific sodium borates 硼酸、特定硼酸鈉	-	All uses 所有用途	1000
4.58	4-(1,1,3,3-tetramethylbutyl) phenol 4-(1,1,3,3-四甲基丁基)苯酚	140-66-9	All uses 所有用途	1000
4.59	Bis(2-methoxyethyl) ether 二乙二醇二甲醚	111-96-6	All uses 所有用途	1000
4.60	N,N-dimethylacetamide(DMAC) N,N-二甲基乙醯胺	127-19-5	All uses 所有用途	1000
4.61	Ethylene glycol dimethyl ether (EGDME) 乙二醇二甲醚	110-71-4	All uses 所有用途	1000
4.62	Trixylyl phthalate (TXP) 磷酸三(二甲苯)酯	25155-23-1	All uses 所有用途	1000
4.63	Nickel 鎳	7440-02-0	All uses 所有用途	Declarable 宣告
4.64	Brominated flame retardants 溴系阻燃劑 (BFR)	-	Non-metallic category, plastics 非金屬, 塑膠	900
4.65	Chlorinated flame retardants 氯系阻燃劑 (CFR)	-	Non-metallic category, plastics 非金屬, 塑膠	900
4.66	Radioactive substances 放射性物質	-	All uses 所有用途	Banned 禁用
4.67	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene(Dechlorane Plus™) 德克隆(涵蓋各個反式及順式同分異構物或者相關組合)	-	All uses 所有用途	Banned 禁用
4.68	Halogenated flame retardants (other than brominated and chlorinated flame retardants) 鹵化阻燃劑(溴化及氯化阻燃劑除外)	-	Plastics 塑膠	1000
4.69	Long-chain(C9-C20) perfluorocarboxylic acids(PFCAs) and its salts and related substances 長鏈(C9-C20)全氟羧酸(PFCAs)及其鹽類和相關物質	-	All uses 所有用途	Banned 禁用
4.70	Perfluorohexanoic acid(PFHxA)and its salts and related substances 全氟己酸(PFHxA)及其鹽類和相關物質	-	All uses 所有用途	Banned 禁用

No.	Substance Name	CAS Number	Targets	Limit (ppm)
4.71	Decabromodiphenylethane (DBDPE) 十溴二苯乙烷(DBDPE)	84852-53-9	All uses 所有用途	Banned 禁用
4.72	Long-chain perfluoroalkyl carboxylate(LCPFAC)and perfluoroalkyl sulfonate chemicals 長鏈全氟烷基羧酸鹽(LCPFAC)和全氟烷基磺酸鹽	-	Follow Annex D of SS-00259	Banned 禁用
4.73	C9-C14 perfluorocarboxylic acids (PFCAs) and its salts C9-C14 全氟羧酸及其鹽	-	All uses 所有用途	Banned 禁用
4.74	C9-C14 perfluorocarboxylic acids (PFCAs) related substances C9-C14 全氟羧酸相關物質	-	All uses 所有用途	Banned 禁用
4.75	Hexachlorobenzene (HCB) 六氯苯	118-74-1	All uses 所有用途	Banned 禁用
4.76	Per/polyfluoroalkyl substances (PFAS) 全氟多氟烷基物質	-	All uses 所有用途	Banned 禁用
4.77	Chlorinated phenols (PCP) 氯化酚	-	All uses 所有用途	Banned 禁用
4.78	Perfluorohexane-1-sulphonic acid (PFHxS), its salts 全氟己基磺酸(PFHxS)與其鹽類	-	All uses 所有用途	Banned 禁用
4.79	Perfluorohexane-1-sulphonic acid (PFHxS) related substances 全氟己基磺酸(PFHxS)相關物質	-	All uses 所有用途	Banned 禁用
4.80	Mineral oil aromatic hydrocarbons(MOAH)comprising 1 to 7 aromatic rings 含有 1 至 7 個芳香環的礦物油芳烴 (MOAH)	-	All uses 所有用途	Banned 禁用
4.81	Mineral oil aromatic hydrocarbons(MOAH)comprising 3 to 7 aromatic rings 含有 3 至 7 個芳香環的礦物油芳烴 (MOAH)	-	All uses 所有用途	Banned 禁用
4.82	Mineral oil aromatic hydrocarbons(MOAH)comprising 16 to 35 aromatic rings 具有 16 至 35 個碳原子的飽和烴礦物油 (MOSH)	-	All uses 所有用途	Banned 禁用
4.83	Pentachloropheol (PCP)and its salts and esters 五氯酚(PCP)及其鹽類和酯類	-	All uses 所有用途	Banned 禁用
4.84	Diisooctyl Phthalate(DIOP) 鄰苯二甲酸二異辛酯 (DIOP)	-	All uses 所有用途	1000

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(HQ4QC04-A)

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No.	Substance Name	CAS Number	Targets	Limit (ppm)
5. Halogen (IEC 61249-2-21 definition) (Note 2)				
5.1	Total Bromine (Br) 總溴	10097-32-2	Non-metallic category, plastics 非金屬, 塑膠	900
5.2	Total Chlorine (Cl) 總氯	22537-15-1	Non-metallic category, plastics 非金屬, 塑膠	900
5.3	Br+Cl 總溴+總氯	-	Non-metallic category, plastics 非金屬, 塑膠	1500
6. Packaging and Packaging Waste directive (94/62/EC)				
6	Packaging 包裝材 (Pb+Cd+Hg+Cr+6)	-	Packaging Materials 包裝材	<100
7. PAHs directive				
7	Sum of 18 PAHs (多環芳香烴)	-	Plastics 塑膠	0.1
8. Other Hazardous Substances				
8.1	Phosphorus 磷	7723-14-0	Plastics 塑膠	1000
8.2	Red Phosphorus 紅磷	7723-14-0	Plastics 塑膠	Banned 禁用
8.3	Sb ₂ O ₃ 三氧化二銻	1309-64-4	Non-metallic category, plastics 非金屬, 塑膠	1000
8.4	Beryllium 鈹	7440-41-7	All uses 所有用途	1000
8.5	MCCPs 中鏈氯化石蠟	85535-85-9	All uses 所有用途	Banned 禁用
8.6	TBBPA 四溴雙酚 A	79-94-7	All uses 所有用途	Banned 禁用
9. POPs Regulation (EU) No 2019/1021				
9.1	Tetrabromodiphenyl Ether 四溴二苯醚	40088-47-9	All uses 所有用途	Banned 禁用
9.2	1,3-dibromo-2-(3,4-dibromophenoxy)benzene 1,3-二溴-2-(3,4-二溴苯氧基)苯	189084-62-6	All uses 所有用途	Banned 禁用
9.3	1,2-Dibromo-4-(3,4-dibromophenoxy)benzene 1,2-二溴-4-(3,4-二溴苯氧基)苯	93703-48-1	All uses 所有用途	Banned 禁用
9.4	2,3',4,4'-Tetrabromodiphenyl ether 2,3',4,4'-四溴二苯醚	189084-61-5	All uses 所有用途	Banned 禁用
9.5	2,4,4',6-Tetrabromodiphenyl ether 2,4,4',6-四溴二苯醚	189084-63-7	All uses 所有用途	Banned 禁用

No.	Substance Name	CAS Number	Targets	Limit (ppm)
9.6	Pentabromodiphenyl Ether 五溴二苯醚	32534-81-9	All uses 所有用途	Banned 禁用
9.7	2,2',3,4,4'-Pentabromodiphenyl ether 2,2', 3,4,4'-五溴二苯醚	182346-21-0	All uses 所有用途	Banned 禁用
9.8	2,3',4,4',6-Pentabromodiphenyl ether 2,3', 4,4', 6-五溴二苯醚	189084-66-0	All uses 所有用途	Banned 禁用
9.9	Hexabromodiphenyl Ether 六溴二苯醚	36483-60-0	All uses 所有用途	Banned 禁用
9.10	2,2',3,4,4',5'-Hexabromodiphenyl ether 2,2', 3,4,4', 5'-六溴二苯醚	182677-30-1	All uses 所有用途	Banned 禁用
9.11	Heptabromodiphenyl Ether 七溴二苯醚	68928-80-3	All uses 所有用途	Banned 禁用
9.12	Bis(Pentabromophenyl)Ether 雙(五溴苯基)醚	1163-19-5	All uses 所有用途	Banned 禁用
9.13	Perfluorooctane Sulfonic Acid And Its Derivatives (PFOS)全氟辛烷磺酸及其衍生物	307-35-7 1691-99-2 1763-23-1 2795-39-3 4151-50-2 24448-09-7 29081-56-9 29457-72-5 31506-32-8 56773-42-3 70225-14-8 251099-16-8	All uses 所有用途	Banned 禁用
9.14	DDT (1,1,1-Trichloro-2,2-Bis(4-Chlorophenyl)Ethane) 滴滴涕(1,1,1-三氯-2,2-雙(4-氯苯基)乙烷)	50-29-3	All uses 所有用途	Banned 禁用
9.15	Chlordane 氯丹	57-74-9	All uses 所有用途	Banned 禁用
9.16	Hexachlorocyclohexanes, Including Lindane 六氯環己烷, 包括林丹	58-89-9 319-84-6 319-85-7 608-73-1	All uses 所有用途	Banned 禁用
9.17	Dieldrin 狄氏劑	60-57-1	All uses 所有用途	Banned 禁用
9.18	Endrin 異狄氏劑	72-20-8	All uses 所有用途	Banned 禁用
9.19	Heptachlor 七氯	76-44-8	All uses 所有用途	Banned 禁用

No.	Substance Name	CAS Number	Targets	Limit (ppm)
9.20	Endosulfan 硫丹	115-29-7 959-98-8 33213-65-9	All uses 所有用途	Banned 禁用
9.21	Hexachlorobenzene 六氯苯	118-74-1	All uses 所有用途	Banned 禁用
9.22	Chlordecone 十氯酮	143-50-0	All uses 所有用途	Banned 禁用
9.23	Aldrin 奧爾德林	309-00-2	All uses 所有用途	Banned 禁用
9.24	Pentachlorobenzene 五氯苯	608-93-5	All uses 所有用途	Banned 禁用
9.25	Polychlorinated Biphenyls (PCB) 多氯聯苯	1336-36-3	All uses 所有用途	Banned 禁用
9.26	Pentachloro[1,1'-biphenyl] 五氯[1,1'-聯苯]	25429-29-2	All uses 所有用途	Banned 禁用
9.27	2,2',4,4'-tetrachlorobiphenyl 2,2', 4,4'-四氯聯苯	2437-79-8	All uses 所有用途	Banned 禁用
9.28	Chloro-1,1'-biphenyl 氯-1,1'-聯苯	27323-18-8	All uses 所有用途	Banned 禁用
9.29	Heptachloro-1,1'-biphenyl 七氯-1,1'-聯苯	28655-71-2	All uses 所有用途	Banned 禁用
9.30	Tetrachloro(tetrachlorophenyl)benzene 四氯(四氯苯基)苯	31472-83-0	All uses 所有用途	Banned 禁用
9.31	2,2',4,4',6,6'-hexachlorobiphenyl 2,2', 4,4', 6,6'-六氯聯苯	33979-03-2	All uses 所有用途	Banned 禁用
9.32	Nonachloro-1,1'-biphenyl 九氯-1,1'-聯苯	53742-07-7	All uses 所有用途	Banned 禁用
9.33	2,4,4'-trichlorobiphenyl 2,4,4'-三氯聯苯	7012-37-5	All uses 所有用途	Banned 禁用
9.34	1,1'-Biphenyl, chloro derivs. 1,1'-聯苯, 氯衍生物。	1336-36-3	All uses 所有用途	Banned 禁用
9.35	4,4'-dichlorobiphenyl 4,4'-二氯聯苯	2050-68-2	All uses 所有用途	Banned 禁用
9.36	Decachloro-1,1'-biphenyl 十氯-1,1'-聯苯	2051-24-3	All uses 所有用途	Banned 禁用
9.37	2-chlorobiphenyl 2-氯聯苯	2051-60-7	All uses 所有用途	Banned 禁用
9.38	3-chlorobiphenyl 3-氯聯苯	2051-61-8	All uses 所有用途	Banned 禁用
9.39	4-chlorobiphenyl 4-氯聯苯	2051-62-9	All uses 所有用途	Banned 禁用
9.40	Dichlorobiphenyl 二氯聯苯	25512-42-9	All uses 所有用途	Banned 禁用

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No.	Substance Name	CAS Number	Targets	Limit (ppm)
9.41	Mirex 滅蟻靈	2385-85-5	All uses 所有用途	Banned 禁用
9.42	Toxaphene 毒殺芬	8001-35-2	All uses 所有用途	Banned 禁用
9.43	Hexabromobiphenyl 六溴代二苯	36355-01-8	All uses 所有用途	Banned 禁用
9.44	Hexabromocyclododecane 六溴環十二烷	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	All uses 所有用途	Banned 禁用
9.45	Hexachlorobutadiene 六氯丁二烯	87-68-3	All uses 所有用途	Banned 禁用
9.46	Pentachlorophenol And Its Salts And Esters 五氯苯酚及其鹽和酯	87-86-5	All uses 所有用途	Banned 禁用
9.47	N2-benzyl pentachlorophenyl N2-carboxy-L-(2-aminoglutaramate) N2-苄基五氯苯基 N2-羧基-L-(2-氨基戊二酸酯)	13673-51-3	All uses 所有用途	Banned 禁用
9.48	Perchlorophenyl N-(benzyloxycarbonyl)-L-isoleucinate N-(苄氧羰基)-L-異亮氨酸全氯苯基	13673-53-5	All uses 所有用途	Banned 禁用
9.49	Perchlorophenyl S-benzyl-N-(benzyloxycarbonyl)-L-cysteinate 全氯苯基 S-苄基-N-(苄氧羰基)-L-半胱氨酸	13673-54-6	All uses 所有用途	Banned 禁用
9.50	Pentachlorophenyl N-[(4-methoxyphenyl)methoxy]carbonyl]-L-serinate 五氯苯基 N-[(4-甲氧基苯基)甲氧基]羰基]-L-絲氨酸	23234-97-1	All uses 所有用途	Banned 禁用
9.51	Perchlorophenyl 5-oxo-L-prolinate 5-氯-L-脯氨酸全氯苯基	28990-85-4	All uses 所有用途	Banned 禁用
9.52	Sodium pentachlorophenolate 五氯酚鈉	131-52-2	All uses 所有用途	Banned 禁用
9.53	Pentachlorophenol esters 五氯酚酯	-	All uses 所有用途	Banned 禁用
9.54	Pentachlorophenol salts 五氯酚鹽	-	All uses 所有用途	Banned 禁用
9.55	Zinc bis(pentachlorophenolate) 雙(五氯酚酸鋅)	2917-32-0	All uses 所有用途	Banned 禁用
9.56	Pentachlorophenyl laurate 五氯苯基月桂酸酯	3772-94-9	All uses 所有用途	Banned 禁用
9.57	Potassium pentachlorophenolate 五氯酚酸鉀	7778-73-6	All uses 所有用途	Banned 禁用
9.58	Polychlorinated Naphthalenes 多氯萘	70776-03-3	All uses 所有用途	Banned 禁用

No.	Substance Name	CAS Number	Targets	Limit (ppm)
9.59	Alkanes C10-C13, Chloro (SCCPs) 烷烴 C10-C13，氯（短鏈氯化石蠟）	85535-84-8	All uses 所有用途	Banned 禁用
9.60	Polychlorinated Dibenzo-P-Dioxins And Dibenzofurans (PCDD/PCDF) 多氯二苯並對二噁英和二苯並呋喃	-	All uses 所有用途	Banned 禁用
9.61	Polycyclic Aromatic Hydrocarbons (PAHS) 多環芳烴	-	All uses 所有用途	Banned 禁用
9.62	Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds 全氟辛酸（PFOA），其鹽和PFOA相關化合物	335-67-1	All uses 所有用途	Banned 禁用
9.63	Dicofol 三氯殺蟎醇	115-32-2	All uses 所有用途	Banned 禁用
9.64	Perfluorohexane-1-sulphonic acid, its salts and related substances (PFHxS) (Note 3) 全氟己烷-1-磺酸、其鹽類及相關物質	-	All uses 所有用途	Banned 禁用
10.Toxic Substances Control Act (TSCA)(EPA-HQ-OPPT-2019-0080-0001)				
10.1	Decabromodiphenyl ether (DecaBDE) 十溴二苯醚	1163-19-5	All uses 所有用途	Banned 禁用
10.2	Phenol, isopropylated phosphate (3:1) (PIP (3:1)) 苯酚，異丙基磷酸酯（3：1）	68937-41-7	All uses 所有用途	Banned 禁用
10.3	2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP) 2,4,6-三（叔丁基）苯酚	732-26-3	All uses 所有用途	Banned 禁用
10.4	Hexachlorobutadiene (HCBd) 六氯丁二烯	87-68-3	All uses 所有用途	Banned 禁用
10.5	Pentachlorothiophenol (PCTP) 五氯硫酚	133-49-3	All uses 所有用途	Banned 禁用
11.Maine H.P. 1113-L.D. 1503				
11.1	Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) 全氟多氟烷基物質	-	All uses 所有用途	Banned 禁用

Notes:

- 1.The following applicable exemptions are currently outlined in RoHS directive 2011/534/EU.
These are identified in the product lists (TSC Environmental Compliance)
 - 1.1 7a. Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead)
 - 1.2 7(C)-I. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g., piezo electronic devices, or in a glass or ceramic matrix compound.
- 2.Halogen (Cl / Br) PPM limit only applies to Halogen Free products.
- 3.The detail please refer to [EU POPs](#) website.



Smile Chung
Quality Reliability Assurance
Taiwan Semiconductor Co., Ltd.
October 18, 2024

Signature: Smile Chung