

## 盛群禁限用管理物質標準 Holtek Banned and Restricted Substance List and its Threshold

### 一、目的

盛群半導體股份有限公司為因應國際法律規章及客戶要求，特制定此表代表本公司產品符合之環境相關物質與規格，以確保產品不含有傷害人體的有害物質。

#### A. Purpose

In order to comply with the international regulations for the banned and restricted substances and meet the customers' requirements, Holtek makes this substances list and defines the threshold of each item to ensure that our products can meet the standards in the international regulations and be free of the hazardous substances that may be harmful to humans.

### 二、盛群禁限用物質管限制值

#### B. Definition of Prohibited and Restricted Substances and their Threshold

**Table 1.**

物質名稱 Substances	限制值 Threshold (ppm)
鎘及鎘化合物 Cadmium and cadmium compounds (Cd)	100ppm in Plastics
鉛及鉛化合物 Lead and lead compounds (Pb)	100ppm in Plastics 1000 ppm in Solders
汞及汞化合物 Mercury and mercury compounds(Hg)	1000ppm
六價鉻化合物 Hexavalent chromium compounds(Cr+6)	1000ppm
鎳及鎳化合物 Nickel and nickel compounds(Ni)	1000ppm
砷及砷化合物 Arsenic and arsenic compounds(As)	100ppm
鉍及鉍化合物 Bismuth and bismuth compounds(Bi)	1000ppm
銻及銻化合物 Antimony and antimony compounds(Sb)	1000ppm
多溴聯苯 (PBB) Polybrominated biphenyls	5ppm
包含十溴聯苯醌(DecaBDE)多溴二苯醌(PBDE)	5ppm
四溴丙二酚(TBBP-A) Tetrabromobisphenol-A	1000ppm
六溴環十二烷(HBCDD) Hexabromocyclododecane	1000ppm
其他有機溴化合物 Other brominated organic compounds	1000ppm
多氯聯苯(PCB) Polychlorinated biphenyls	Prohibited
多氯聯萘(PCN) Polychlorinated naphthalenes	Prohibited
聚氯三聯苯(PCT) Polychlorinated terphenyls	Prohibited
短鏈型氯代烷烴(SCCP) Short-chain chlorinated paraffins	Prohibited
氯化烷烴(氯化石蠟)(CP) Chlorinated Paraffins	1000ppm
聚氯乙烯(PVC)以及聚氯乙烯混合物 Polyvinyl chloride and PVC blends	Prohibited
其他有機氯化物 Other chlorinated organic compounds	1000ppm

物質名稱 Substances	限制值 Threshold (ppm)
三取代基有機錫化合物（三丁基錫化合物、三苯基錫化合物） Trisubstituted organotin compounds (Triphenyl tin compounds(TPT) 、Tributyl tin compounds(TBT))	Prohibited
石棉 Asbestos	Prohibited
特定偶氮化合物 Specific Azo compounds	Prohibited
甲醛 Formaldehyde	Prohibited
發泡聚苯乙烯（EPS） Expanded Polystyrene	Prohibited
臭氧危害物質 (ODS) Ozone depleting substances	Prohibited
放射性物質 Radioactive substances	Prohibited
氧化鈹 Beryllium oxide	Prohibited
鈹及其化合物(Be)（鈹青銅Beryllium copper）	To Be Observed
特定鄰苯二甲酸鹽（DEHP、DBP、BBP、DINP、DIDP、DNOP、DNHP、Di-(2-methoxyethyl) phthalate、other phthalates）	1000ppm
鄰苯二甲酸二異壬酯、鄰苯二甲酸二異癸酯、鄰苯二甲酸二正辛酯、鄰苯二甲酸二己酯、 Di-isononyl phthalate, Di-isodecyl phthalate, Di-n-octyl phthalate, Di-n-hexyl phthalate, 鄰苯二甲酸二（C6-8支鏈）烷基酯、富C7（DIHP） 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich, 鄰苯二甲酸二（C7-11支鏈與直鏈）烷基酯（DHNUP） 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters, 鄰苯二甲酸二甲氧乙酯（DMEP） Bis(2-methoxyethyl) phthalate	1000ppm
氫氟碳化合物（HFC）、全氟化碳（PFC）	Prohibited
硒及硒化合物 Selenium and selenium compounds (Se)	1000ppm
非特定溴係阻燃劑（除PBB、PBDE類） Non-specific brominated flame-retardants（excluding PBB、PBDE）	To Be Observed
全氟辛烷硫磺酸(及其鹽)(PFOS) Perfluorooctane sulfonates	1000 ppm in parts 50 ppm in preparations
全氟辛烷酸(PFOA)及其鹽類與脂類 Perfluorooctyl acid and individual salts and esters of PFOA	50ppm
特定苯並三氮唑 Specific benzotriazole	Prohibited
鹵化二苯基甲烷 Halogenated diphenyl methanes	Prohibited
雙酚A (Bisphenol-A；BPA)	50ppm
氣味物質(二甲苯麝香及酮麝香) Fragrance substance (Musk xylene and Musk ketone)	500ppm
界面活性劑 (DTDMAC,DODMAC/DSDMAC and DHTDMAC)(Surfactants)	1000ppm
五氯酚 (PCP) Pentachlorophenol	1000ppm
三氯沙 Triclosan	10ppm
二氯化鈷 Cobalt dichloride	Prohibited
鹵素 (Halogen) 氯(Cl)、溴(Br)	Cl < 900ppm (0.09%) Br < 900ppm (0.09%) Cl+Br < 1500ppm (0.15%)

物質名稱 Substances	限制值 Threshold (ppm)
富馬酸二甲酯 (dimethylfumarate ; DMF)	0.1ppm
多環芳香烴化合物 (PAHs) Polycyclic Aromatic Hydrocarbons	Prohibited
二丁基錫化合物 (DBT) Dibutyltin compounds	Prohibited
二辛基錫化合物 (DOT) Dioctyltin compounds	Prohibited
磷酸三硬脂精 (2-氯二乙硫醚)(TCEP)Tris(2-chloroethyl) phosphate	1000ppm
三氧化二砷、五氧化二砷Diarsenic trioxide, Diarsenic pentaoxide	1000ppm
硼酸、特定硼酸鈉Boric acid, specific sodium borates	To Be Observed
4 - (1,1,3,3 - 四甲基丁基) 苯酚 4-(1,1,3,3-tetramethylbutyl) phenol	1000ppm
氬代雙(2-甲氧基乙基)醚 Bis(2-methoxyethyl) ether	1000ppm
N', N-二甲基乙酰胺 (DMAC) N,N-dimethylacetamide	1000ppm
包材類 Packaging Materials : 符合包裝及包裝廢棄物指令(94/62/EC)規定 Meet the requirement of 94/62/EC directive.	Cd+Pb+Hg+Cr <sup>6+</sup> <100ppm

Table 2.

◎ 產品內所含之高關注物質 SVHC in Holtek's product, <=1000ppm	
高關注物質名稱 Anticipated SVHC Substance	EC 號碼 EC No.
蒽 (Anthracene)	204-371-1
4,4'-二胺基二苯甲烷 (4,4' -Diaminodiphenylmethane)	202-974-4
二氯化鈷 Cobalt dichloride	231-589-4
五氧化二砷 Diarsenic pentaoxide	215-116-9
三氧化二砷 Diarsenic trioxide	215-481-4
重鉻酸鈉 Sodium dichromate	234-190-3
內二甲苯麝香 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4
鄰苯二甲酸二丁酯 (DBP)Dibutyl Phthalate (DBP)	201-557-4
鄰苯二甲酸二(2-乙基己基)酯 Bis (2-ethyl(hexyl)phthalate) (DEHP)	204-211-0
鄰苯二甲酸丁酯苯甲酯(BBP) Benzyl butyl phthalate (BBP)	201-622-7
六溴環十二烷 及其異構物Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	247-148-4 and 221-695-9
短鏈氯化石蠟 Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCPs)	287-476-5
氧化三丁錫 Bis(tributyltin) oxide (TBTO)	200-268-0
砷酸鉛 Lead hydrogen arsenate	232-064-2
三乙砷酸酯 Triethyl arsenate	427-700-2
二硝基甲苯 2,4-Dinitrotoluene	204-450-0

高關注物質名稱 Anticipated SVHC Substance	EC 號碼 EC No.
蒽油 Anthracene oil	292-602-7
蒽油、蒽糊、輕油 Anthracene oil, anthracene paste, distn. Lights	295-278-5
蒽油、蒽糊、蒽餾分離液 Anthracene oil, anthracene paste, anthracene fraction	295-275-9
蒽油、含蒽量少 Anthracene oil, anthracene-low	292-604-8
蒽油、蒽糊 Anthracene oil, anthracene paste	292-603-2
鄰苯二甲酸二異丁酯 Diisobutyl phthalate	201-553-2
矽酸鋁、陶瓷耐火纖維 Aluminosilicate, Refractory Ceramic Fibres	650-017-008-a
矽酸鋁氧化鋯、陶瓷耐火纖維 Zirconia Aluminosilicate, Refractory Ceramic	650-017-008-b
鉻酸鉛 Lead chromate	231-846-0
紅色鉬鉻酸鉛硫酸鹽 Lead chromate molybdate sulfate red (C.I. Pigment Red	235-759-9
黃色硫化鉻酸鉛 Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7
三2-(氯乙基)磷酸酯 Tris(2-chloroethyl)phosphate	204-118-5
焦煤瀝青、高溫 Pitch, coal tar, high temperature	266-028-2
三氯乙烯 Trichloroethylene	201-167-4
硼酸 Boric acid	233-139-2 and 234-343-4
硼砂 Disodiumtetraborate,anhydrous	215-540-4
水合硼酸鈉 Tetraboron disodium heptaoxide, hydrate	235-541-3
鉻酸鈉 Sodium chromate	231-889-5
鉻酸鉀 Potassium chromate	232-140-5
重鉻酸銨 Ammonium dichromate	232-143-1
重鉻酸鉀 Potassium dichromate	231-906-6
丙烯醯胺 Acrylamide	201-173-7
硫酸鈷 (II) Cobalt(II) sulphate	233-334-2
硝酸鈷 (II) Cobalt(II) dinitrate	233-402-1
碳酸鈷 (II)Cobalt(II) carbonate	208-169-4
醋酸鈷 (II) Cobalt(II) diacetate	200-755-8
2-甲氧基乙醇 2-Methoxyethanol	203-713-7
2-乙氧基乙醇 2-Ethoxyethanol	203-804-1
三氧化鉻 Chromium trioxide	215-607-8
由三氧化鉻和其他低聚物形成的酸類:鉻酸/ 重鉻酸/ 鉻酸和重鉻酸的低聚物 Acids generated from chromium trioxide and their oligomers: Chromic acid/ Dichromic acid/ Oligomers of chromic acid and dichromic acid	231-801-5 and 236-881-5
乙二醇乙醚醋酸酯 2-Ethoxyethyl acetate	203-839-2
鉻酸鋇 strontium chromate	232-142-6
鄰苯二甲酸二 (C7-11支鏈與直鏈) 烷基酯 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6
聯氨 Hydrazine	206-114-9
N-甲基吡咯烷酮 1-methyl-2-pyrrolidone	212-828-1
1,2,3-三氯丙烷 1,2,3-Trichloropropane	202-486-1

鄰苯二甲酸二 (C6-8支鏈與直鏈) 烷基酯，富C7 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1
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### 注意事項 Notes:

盛群產品所使用的物料中符合歐盟《化學物品的註冊、評估、授權與限制法令》1907/2006/EC (REACH)要求之高度關注物質 (SVHC)。當 SVHC 定義的物質含量  $\geq 0.1\%$  與  $\geq 1$  ton/year，盛群會揭露相關訊息，以符合歐盟法規要求。

All raw materials that are used inside Holtek's products meet the SVHC (Substances of Very High Concern) requirements of REACH, 1907/2006/EC (Registration, Evaluation, Authorisation of Chemicals). When the substances defined in the SVHC is  $\geq 0.1\%$  and  $\geq 1$  ton/year, Holtek will disclose the related information to meet the requirements of European Union regulations.