

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

The details of controlled rule, please reference to “ProMOS Hazardous Substances Management Specification”. (FQSQG-0060) ver G which is effective on Aug 16 , 2010.

詳細管制辦法，請參考“茂德有害物質管理規範”(FQSQG-0060) ver. G，生效於2010年8月16日。

### List of Hazardous Substances Controlled by ProMOS 茂德有害物質管制清單

The below list contains the hazardous substances that are prohibited and restricted. Please indicate if the following substances are contained or used in the commodities or processes. When substances are repeated within the list of hazardous substances, and the management level or permissible concentration conflict, the suppliers, subcontractors and IC/Module suppliers should be follow the most stringent standards.

下表所列為禁止和限制使用之有害物質清單，請依序鑑別 貴公司所提供予茂德科技的商品或製程中，是否含有或使用下表之有害物質。當物質重複出現在危害物質清單且管理級別或容許濃度發生衝突時，供應商、外包商和 IC/Module 供應商應遵照最嚴格的標準。

Group	Item	Substance 物質名稱	Description 說明
RoHS item	1	Lead and its compounds 鉛及鉛化合物	Annex 1 附表 1
	2	Cadmium and its compounds 鎘及鎘化合物	Annex 2 附表 2
	3	Mercury and its compounds 汞及汞化合物	Annex 3 附表 3
	4	Chromium VI and its compounds 六價鉻化合物	Annex 4 附表 4
	5	Polybrominated Biphenyls (PBBs) 多溴聯苯	Annex 5 & 6 附表 5 & 6
	6	Polybrominated Diphenyl ethers (PBDEs [including DecaBDE]) 多溴二苯醚[含 DecaBDE]	
Heavy metal	7	Antimony and its compounds 銻及銻化合物	Annex 7 附表 7
	8	Arsenic and its compounds 砷及砷化合物	Annex 8 附表 8
	9	Beryllium and its compounds 鈹及鈹化合物	Annex 9 附表 9
	10	Selenium and its compounds 硒及硒化合物	Annex 10 附表 10
	11	Nickel and its compounds 鎳及鎳化合物	Annex 11 附表 11
	12	Bismuth and its compounds 鉍及鉍化合物	Annex 12 附表 12
	13	Magnesium and its alloys 鎂及鎂合金	Annex 13 附表 13
	14	Thallium and its compounds 鉈及鉈化合物	Annex 14 附表 14
	15	Copper and its compounds 銅及銅化合物	Annex 15 附表 15
	16	Gold and its compounds 金及金化合物	Annex 16 附表 16

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Group	Item	Substance 物質名稱	Description 說明
	17	Palladium and its compounds 鈀及鈀化合物	Annex 17 附表 17
	18	Silver and its compounds 銀及銀化合物	Annex 18 附表 18
	19	Barium and its compounds 鋇及鋇化合物	Annex 19 附表 19
	20	Tellurium and its compounds 碲及碲化合物	Annex 20 附表 20
	21	Chromium and its compounds (excluding chromium VI and its compounds) 鉻及鉻化合物(不含六價鉻化合物)	Annex 21 附表 21
	22	Cobalt and its compounds 鈷及鈷化合物	Annex 22 附表 22
	23	Organic Tin compounds 有機錫化合物	Annex 23 附表 23
	24	Heavy Metals in packaging Materials 包裝材料重金屬	Annex 24 附表 24
Halogenated compound	25	Bromine(Br) 總溴	Annex 25 附表 25
	26	Chlorine(Cl) 總氯	Annex 26 附表 26
	27	Polychlorinated Terphenyls(PCTs), Polychlorinated Naphthalenes(PCNs) 多氯三聯苯,多氯化萘	Annex 27 附表 27
	28	Tetrabromobisphenol-A (TBBP-A) 四溴丙二酚	Annex 28 附表 28
	29	Short-chain Chlorinated Paraffins, SCCP 短鏈氯化石蠟	Annex 29 附表 29
	30	Medium-chain Chlorinated Paraffins, MCCP 中鏈氯化石蠟	Annex 30 附表 30
	31	Poly Vinyl Chloride, PVC 聚氯乙烯	Annex 31 附表 31
	32	Chlorinated Solvents 氯化有機溶劑	Annex 32 附表 32
	33	Halogenated aromatic substances (excluding Polychlorinated Biphenyls(PCBs)) 鹵化芳香族物質(不含多氯聯苯(PCBs))	Annex 33 附表 33
	34	Halogenated diphenyl methanes 鹵化二苯基甲烷	Annex 34 附表 34
	35	Hexachloroethane 六氯乙烷	Annex 35 附表 35
36	Brominated flame retardants (BFRs, other than PBBs or PBDEs) 溴化阻燃劑(不含多溴聯苯及多溴二苯醚)	Annex 36 附表 36	
37	Chlorinated flame retardants (CFRs) 氯化阻燃劑	Annex 37 附表 37	
38	Perfluorooctyl acid, PFOA and individual salts and esters of PFOA 全氟辛酸、鹽、酯	Annex 38 附表 38	
39	Hexabromocyclododecane (HBCDD/HBCD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	Annex 39 附表 39	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Group	Item	Substance 物質名稱	Description 說明
		六溴環十二烷及其主要異構物( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	
	40	Dimethyl ditallow ammonium chloride (DTDMAC) 二牛油烷基二甲基氯化銨 (DTDMAC) Diocetyl dimethyl ammonium chloride/Distearyl dimethyl ammonium chloride (DODMAC/DSDMAC) 雙硬脂酰基二甲基氯化銨/二硬脂基二甲基氯化銨 (DODMAC/DSDMAC) Dihydrogenated tallow dimethyl ammonium chloride (DHTDMAC) 雙(氫化牛油烷基)二甲基氯化銨 (DHTDMAC)	Annex 40 附表 40
	41	Pentachlorophenol (PCP) 五氯酚(PCP)	Annex 41 附表 41
	42	Triclosan 三氯沙	Annex 42 附表 42
	43	<b>Persistent Organic Pollutants (POPs)</b> <b>持久性有機污染物</b>	Annex 43 附表 43
	44	Pentachlorobenzene 五氯苯	Annex 44 附表 44
	45	Hexachlorobuta-1, 3-diene 六氯-1,3-丁二烯	Annex 45 附表 45
	46	Perfluoroalkylsulfonates (PFASs) (excluding PFOSs and PFOSF) 全氟烷基磺酸鹽(PFAS)(不含PFOSs和PFOSF)	Annex 46 附表 46
	47	Perfluorooctane sulfonic acid(PFOS), its salts and perfluorooctane sulfonyl fluoride(PFOSF) 全氟辛烷磺酸、其鹽類和全氟辛基磺醯氟	Annex 47 附表 47
Ozone Depletion/ Greenhouse Gas	48	Ozone depleting substances (CFCs, HCFCs, HBFCs, Halons) 臭氧層破壞物質	Annex 48 附表 48
	49	Perfluorocarbon and Sulfur hexafluoride, PFCs and SF <sub>6</sub> 全氟碳化物和六氟化硫	Annex 49 附表 49
	50	Hydrofluorocarbons (HFCs) 氫氟碳化物	Annex 50 附表 50
	51	Chlorinated hydrocarbons (CHCs) [including Carbon tetrachloride, Tetrachloroethylene] 氯化碳氫化合物	Annex 51 附表 51
	52	Methyl bromide 溴化甲烷	Annex 52 附表 52
Others Chemical	53	Asbestos 石棉	Annex 53 附表 53
	54	Azo compounds 偶氮化合物	Annex 54 附表 54
	55	Formaldehyde 甲醛	Annex 55 附表 55
	56	Phosphorus and its compounds 磷及磷化合物	Annex 56 附表 56
	57	Phthalates 鄰苯二甲酸鹽	Annex 57 附表 57
	58	Radioactive substances 放射性物質	Annex 58 附表 58

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Group	Item	Substance 物質名稱	Description 說明
	59	Polycyclic Aromatic Hydrocarbons (PAHs ) 多環芳香烴	Annex 59 附表 59
	60	Bisphenol A/ Bisphenol F 雙酚A/ 雙酚F	Annex 60 附表 60
	61	Musk xylene 二甲苯麝香	Annex 61 附表 61
	62	Musk ketone 麝香酮	Annex 62 附表 62
	63	Specific benzotriazole [2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole] 特定苯并三氮唑 [2-(3,5-二叔丁基-2-羟基苯基)苯駢三唑]	Annex 63 附表 63
	64	Expanded Polystyrene (EPS) 發泡聚苯乙烯	Annex 64 附表 64
	65	Cyanide compounds 氰化物	Annex 65 附表 65
	66	Benzene 苯	Annex 66 附表 66
	67	2,4,6-tri-tert-butylphenol 2,4,6-三異丁基苯	Annex 67 附表 67
	68	N,N'-ditolyl-p-p henylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine, N,N'-dixylyl-p-phenylenediamine 苯二胺	Annex 68 附表 68
	69	Dimethylfumarate (DMF) 富馬酸二甲酯(DMF)	Annex 69 附表 69
	70	4-nitrodiphenyl and its salts 4-硝基聯苯及其鹽類	Annex 70 附表 70
	71	REACH SVHC Candidate List (I, II & III) REACH高關切物質候選清單 (第一批、第二批及第三批)	Annex 71 附表 71
	72	Global Automotive Declarable Substance List (GADSL) 全球汽車申報物質清單	Annex 72 附表 72

### Annex 附表 1. Lead and its compounds 鉛及鉛化合物

Substance : Lead and its compounds 物質名稱：鉛及其化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• Packaging materials (Refer to Annex.24) 包裝材料 (參考附表24)</li> <li>• All solder materials (whose lead concentration is more than 500ppm) 各種錒錫材料(鉛含量超過500ppm以上者)</li> <li>• Lead carbonates and lead sulfates use in paints. 塗料中使用碳酸鉛及硫酸鉛。</li> </ul>	Already prohibited 立即禁止使用

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	<ul style="list-style-type: none"> <li>All uses except those specified in above 除上述項目以外的所有用途。</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained[plastics (including rubber), paints, and inks with concentration of lead less than 100ppm] 不得檢出或不得含有[塑膠(含橡膠)、塗料、油墨需小於100ppm]	

### Annex 附表 2. Cadmium and its compounds 鎘及鎘化合物

Substance : Cadmium and its compounds 物質名稱：鎘及鎘其化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Packaging materials (Refer to Annex.24) 包裝材料(參考附表24)</li> <li>All uses except those specified in above 除上述項目以外的所有用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained[plastics (including rubber), paints, and inks less than 5ppm] 不得檢出或不得含有[塑膠(含橡膠)、塗料、油墨須小於5ppm]	

### Annex 附表 3. Mercury and its compounds 汞及汞化合物

Substance : Mercury and its compounds 物質名稱：汞及其化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Packaging materials (Refer to Annex.24) 包裝材料(參考附表24)</li> <li>All uses except those specified in above 除上述項目以外的所有用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 4. Chromium VI and its compounds 六價鉻化合物

Substance : Chromium VI and its compounds 物質名稱：六價鉻及其化合物		
	Targets 對象	Delivery

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		prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• Packaging materials (Refer to Annex.24) 包裝材料(參考附表24)</li> <li>• All uses except those specified in above 除上述項目以外的所有用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表5&6. Polybromic biphenyls (PBBs) and Polybrominated diphenyl ethers (PBDEs) (including decabromodiphenyl ether [DecaBDE]) 多溴聯苯、多溴二苯醚

Substance : Polybromic biphenyls (PBBs) and Polybrominated diphenyl ethers (PBDEs including DecaBDE) 物質名稱:多溴聯苯(PBBs)、多溴二苯醚(PBDEs)[含DecaBDE]		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses (e.g. flame retardants contained in plastics) 各式用途(如塑膠中阻燃劑)</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 7. Antimony and its compounds 銻及銻化合物

Substance : Antimony and its compounds 物質名稱：銻及銻化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• Halogen-Free Products and Related Parts (whose antimony concentration is more than 900ppm) [Only apply to Subcontractors and IC/Module Suppliers] 無鹵產品和相關零組件(銻含量超過900ppm以上者)[僅適用於外包商和IC/Module供應商]</li> <li>• Antimony trioxide in all uses. 三氧化二銻的所有用途</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>• All uses except those specified in prohibited level. 除上述禁用等級以外的所有用途</li> </ul>	

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Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有
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### Annex 附表 8. Arsenic and its compounds 砷及砷化合物

Substance : Arsenic and its compounds 物質名稱：砷及砷化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>The wooden products made from fiberboard, particleboard, or plywood, which are employed in packaging materials for deliver to customer or export to other countries. (e.g. pallet, etc.) 使用木工產品(如纖維板、木屑板或夾合板等)製成包裝材料須運送至客戶或出口至其他國家者(如木棧板等)。</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in prohibited level. 除上述禁用等級以外的所有用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 9. Beryllium and its compounds 鈹及鈹化合物

Substance : Beryllium and its compounds 物質名稱：鈹及鈹化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Beryllium oxide and Beryllium copper in all uses 氧化鈹和鈹青銅之各式用途</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in Prohibited Level. 除上述禁用等級以外的所有用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 10. Selenium and its compounds 硒及硒化合物

Substance : Selenium and its compounds 物質名稱：硒及硒化合物		
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	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses 各式用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 11. Nickel and its compounds 鎳及鎳化合物

Substance : Nickel and its compounds 物質名稱：鎳及鎳化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Organic Nickel compounds in all applications ( e.g. light stabilizer contained in plastics ) 含有有機鎳化合物之各種用途，例如：用於塑膠之光安定劑。</li> <li>Metallic nickel or nickel alloy in products external surface treatment likely to direct contact with skin. 使用含有金屬鎳或鎳合金物質於產品外部表面處理可能與皮膚直接接觸部分。</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in Prohibited Level. 除上述禁用等級以外的所有用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 12. Bismuth and its Compounds 鉍及鉍化合物

Substance : Bismuth and its Compounds 物質名稱：鉍及鉍化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses 各式用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

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Annex 附表 13. Magnesium and its Alloys 鎂及鎂合金

Substance : Magnesium and its Alloys 物質名稱：鎂及鎂合金		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

Annex 附表 14. Thallium and its compounds 鉈及鉈化合物

Substance : Thallium and its compounds 物質名稱：鉈及鉈化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

Annex 附表 15. Copper and its compounds 銅及銅化合物

Substance : Copper and its compounds 物質名稱：銅及銅化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

Annex 附表 16. Gold and its compounds 金及金化合物

Substance : Gold and its compounds 物質名稱：金及金化合物		
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	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表17. Palladium and its compounds 鈀及鈀化合物

Substance : Palladium and its compounds 物質名稱：鈀及鈀化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表18. Silver and its compounds 銀及銀化合物

Substance : Silver and its compounds 物質名稱：銀及銀化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表19. Barium and its compounds 鋇及鋇化合物

Substance : Barium and its compounds 物質名稱：鋇及鋇化合物		
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	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表20. Tellurium and its compounds 碲及碲化合物

Substance : Tellurium and its compounds 物質名稱：碲及碲化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表21. Chromium and its compounds (excluding chromium VI and its compounds) 鉻及鉻化合物(不含六價鉻化合物)

Substance : Chromium and its compounds(excluding chromium VI and its compounds) 物質名稱：鉻及鉻化合物(不含六價鉻化合物)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表22. Cobalt and its compounds 鈷及鈷化合物

Substance : Cobalt and its compounds 物質名稱：鈷及鈷化合物		
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	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Cobalt chloride (including cobalt chloride · hexahydrate) and cobalt trichloride in all uses ( e.g. desiccant indicator and silica gel ) 氯化亞鈷(含無水氯化亞鈷)和氯化鈷之各式用途(例如濕度指示卡和矽膠)</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in prohibited level. 除上述禁用等級以外的所有用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 23. Organic Tin compounds 有機錫化合物

Substance : Organic Tin compounds 物質名稱：有機錫化合物			
	Targets 對象		Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Organic tin compounds (e.g. DBB, TBT, TPT, TBTO, DBT, DOT, etc.) in all uses 有機錫化合物(如DBB, TBT, TPT, TBTO, DBT, DOT等)的各式用途</li> </ul>		Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有		
Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Di-μ-oxo-di-n-butylstanniohydroxyborane (DBB)	75113-37-0	76/769/EEC, 1907/2006/EC, 276/2010/EC, Others
	Tributyl tin (TBT)	688-73-3	
	Triphenyl tin (TPT/TphT)	668-34-8	
	Tributyl tin oxide (TBTO)	56-35-9	
	Dibutyl tin (DBT)	78-04-6	
	Diocetyl tin (DOT)	15231-44-4	
	Others organic tin compound	----	

### Annex 附表 24. Heavy metals in packaging materials ( Hg, Cd, Pb, Cr<sup>6+</sup> ) 包裝材料重金屬 (汞、鎘、鉛、六價鉻)

Substance : Heavy metals in packaging materials ( Hg, Cd, Pb, Cr <sup>6+</sup> ) 物質名稱：包裝材料重金屬 (汞、鎘、鉛、六價鉻)
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## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All packaging materials 所有包裝材料</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	100ppm (Sum of concentrations) 100ppm (各濃度合計) Cadmium concentration level inside the above sum of 100ppm shall be less than 5ppm in plastics (including rubber), paints and ink. 塑膠(含橡膠)、塗料、油墨中重金屬須滿足總合濃度外，鎘的濃度仍須小於5ppm	

### Annex 附表 25. Bromine(Br) 總溴

Substance : Bromine(Br) 物質名稱：總溴		
Scope 適用範圍： Apply to Subcontractors, IC/Module Suppliers and Packaging Suppliers. 僅適用於外包商、IC/Module供應商和包材供應商		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All Packaging materials, Halogen-free Products and Related Parts (excluded manufacturing process) 各式包裝材料、無鹵產品和相關零組件(不含製造過程)</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in prohibited level. 除上述禁用等級以外的所有用途</li> </ul>	
Maximum permissible concentration 許可濃度限值	900ppm [Total concentration of bromine and chlorine shall be less than 1500ppm in all uses] 900ppm[各式用途中總溴和總氯的總和濃度需小於1500ppm]	

### Annex 附表 26. Chlorine(Cl) 總氯

Substance : Chlorine(Cl) 物質名稱：總氯		
Scope 適用範圍： Apply to Subcontractors, IC/Module Suppliers and Packaging Suppliers. 僅適用於外包商、IC/Module供應商和包材供應商		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All Packaging materials, Halogen-free Products and Related Parts (excluded manufacturing process) 各式包裝材料、無鹵產品和相關零組件(不含製造過程)</li> </ul>	Already prohibited 立即禁止使用

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Controlled Level 管制等級	• All uses except those specified in prohibited level. 除上述禁用等級以外的所有用途	
Maximum permissible concentration 許可濃度限值	900ppm [Total concentration of chlorine and bromine shall be less than 1500ppm in all uses] 900ppm [各式用途中總氯和總溴的總和濃度需小於1500ppm]	

### Annex 附表 27. Polychlorinated Terphenyls(PCTs), Polychlorinated Naphthalenes(PCNs)多 氯三聯苯/多氯化萘

Substance : Polychlorinated terphenyls (PCT) , Polychlorinated naphthalenes (PCN) 物質名稱：聚氯三聯苯(PCTs)，多氯化萘(PCNs)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有 不得檢出	

### Annex 附表 28. Tetrabromobisphenol-A (TBBP-A) 四溴丙二酚

Substance : Tetrabromobisphenol-A (TBBP-A) 物質名稱:四溴丙二酚(TBBP-A)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses except those specified in Controlled Level. 除管制等級以外的所有用途	Already prohibited 立即禁止使用
Controlled Level 管制等級	• Printed circuit boards, Wiring and connector 用於印刷電路板、線材與連接器	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 29. Short-chain Chlorinated Paraffins, SCCP 短鏈氯化石蠟

Substance : Short-chain Chlorinated Paraffins(SCCP) [C10-13]
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## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

物質名稱：短鏈氯化石蠟(SCCP) [C10-13]		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 30. Medium-chain Chlorinated Paraffins, MCCP 中鏈氯化石蠟

Substance : Medium-chain Chlorinated Paraffins (MCCP) [C14-17] 物質名稱：中鏈氯化石蠟(MCCP) [C14-17]		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 31. Poly Vinyl Chloride, PVC 聚氯乙烷，PVC

Substance : Poly Vinyl Chloride(PVC) 物質名稱：聚氯乙烷(PVC)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected ( or Negative) or Not contained 不得檢出(或陰性)或不得含有	

### Annex 附表 32. Chlorinated Solvents 氯化有機溶劑

Substance : Chlorinated Solvents 物質名稱：氯化有機溶劑		
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	Targets 對象			Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>			Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有			
Reference 參考	Examples 範例	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規	
	1,1 Dichloroethylene (CHCs item)	75-35-4	Water Pollution Control Law (Japan), 96/55/EC, Switzerland's Chemikalien Rest Risiko Verordnung from 1 July, 2005	
	Pentachloroethane	76-01-7		
	Methylenechloride (CHCs item)	75-09-2		
	Tetrachloromethane (CHCs item)	56-23-5		
	1,1,1,2 Tetrachloroethane (CHCs item)	630-20-6		
	1,1,2,2 Tetrachloroethane (CHCs item)	79-34-5		
	Tetrachloroethylene (CHCs item)	127-18-4		
	Trichloromethane (CHCs item)	67-66-3		
	1,1,2 Trichloroethane (CHCs item)	79-00-5		
	Trichloroethylene (CHCs item)	79-01-6		
	1,1,1-Trichloroethane (TCA) (CHCs item)	71-55-6		
	Bis (chloromethyl) ether	542-88-1		
	Polychlorinated Phenols such as Pentachlorophenol and its salts	87-86-5		
	<a href="#">Cis-1,2-dichloroethylene</a>	156-59-2		
	<a href="#">1,2-Dichloroethane</a>	107-06-2		
	<a href="#">1,3-Dichloropropene</a>	542-75-6		
	Vinyl Chloride (monomer)	75-01-4		

### Annex 附表 33. Halogenated aromatic substances (excluding Polychlorinated Biphenyls(PCBs)) 鹵化芳香族物質(不含多氯聯苯(PCBs))

Substance : Halogenated aromatic substances (excluding Polychlorinated Biphenyls(PCBs)) 物質名稱：鹵化芳香族物質(不含多氯聯苯(PCBs))				
	Targets 對象			Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Monohalogenated aromatic substances use in capacitors and transformers above 500ppm. 單分子鹵化芳香族物質用於電容器和變壓器中高於500ppm。</li> <li>Polyhalogenated aromatic substances use in materials of the component above 50ppm 多分子鹵化芳香族物質用於元件物料中高於50ppm。</li> </ul>			Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All uses except those specified in Prohibited Level. 除禁用等級以外的所有用途。</li> </ul>			
Maximum permissible 許可濃度	Not Detected or Not contained 不得檢出或不得含有			

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concentration 許可濃度限值			
Reference 參考	Examples 範例	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Halogenated diarylalkanes	---	96/55/EC, Switzerland's Chemikalien Rest Risiko Verordnung from 1 July, 2005
	Halogenated benzenes	---	

### Annex 附表 34. Halogenated diphenyl methanes 鹵化二苯基甲烷

Substance : Halogenated diphenyl methanes 物質名稱：鹵化二苯基甲烷		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 35. Hexachloroethane 六氯乙烷

Substance : Hexachloroethane 物質名稱：六氯乙烷		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 36. Brominated flame retardants (BFRs, other than PBBs or PBDEs) 溴化阻燃劑(不含多溴聯苯及多溴二苯醚)

Substance : Brominated flame retardants (BFRs, other than PBBs or PBDEs) 物質名稱：溴化阻燃劑(不含多溴聯苯及多溴二苯醚)		
	Targets 對象	Delivery prohibited date 禁止使用時間

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Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	900ppm	

Annex 附表 37. Chlorinated flame retardants (CFRs) 氯化阻燃劑

Substance : Chlorinated flame retardants (CFRs) 物質名稱：氯化阻燃劑		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	900ppm	

Annex 附表 38. Perfluorooctyl acid, PFOA and individual salts and esters of PFOA 全氟辛酸、鹽、酯

Substance : Perfluorooctyl acid, PFOA and individual salts and esters of PFOA 物質名稱：全氟辛酸、鹽、酯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途	
Maximum permissible concentration 許可濃度限值	A.50ppm B.1ug/m <sup>2</sup> for coated materials. 用於材料表面塗佈為1ug/m <sup>2</sup>	

Annex 附表 39. Hexabromocyclododecane (HBCDD/HBCD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ - HBCDD, $\gamma$ -HBCDD) 六溴環十二烷及其主要異構物( $\alpha$ -HBCDD, $\beta$ - HBCDD, $\gamma$ -HBCDD)

Substance : Hexabromocyclododecane (HBCDD/HBCD) and all major diastereoisomers identified
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(α-HBCDD,β- HBCDD,γ-HBCDD) 物質名稱：六溴環十二烷及其主要異構物(α-HBCDD,β- HBCDD,γ-HBCDD)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

**Annex 附表 40. Dimethyl ditallow ammonium chloride, Dioctyldimethylammonium chloride/ Distearlyldimethylammonium chloride, Dihydrogenated tallow dimethylamm- onium chloride (DTDMAC, DODMAC/DSDMAC, DHTDMAC) 二牛油烷基二甲基氯化銨，雙硬脂酰基二甲基氯化銨/二硬脂基二甲基氯化銨，雙（氯化牛油烷基）二甲基氯化銨**

Substance : Dimethyl ditallow ammonium chloride, Dioctyldimethylammonium chloride/ Distearlyldimethylammonium chloride, Dihydrogenated tallow dimethylamm- onium chloride (DTDMAC, DODMAC/DSDMAC, DHTDMAC) 物質名稱：二牛油烷基二甲基氯化銨，雙硬脂酰基二甲基氯化銨/二硬脂基二甲基氯化銨，雙（氯化牛油烷基）二甲基氯化銨		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses (e.g. surfactants) 各式用途（如界面活性劑）</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

**Annex 附表 41. Pentachlorophenol (PCP) 五氯酚**

Substance : Pentachlorophenol (PCP) 物質名稱：五氯酚		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用

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Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有
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### Annex附表42. Triclosan 三氯沙

Substance : Triclosan 物質名稱：三氯沙		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表43. Persistent Organic Pollutants (POPs) 持久性有機污染物(POPs)

Substance : Persistent Organic Pollutants (POPs) 物質名稱：持久性有機污染物(POPs)			
	Targets 對象		Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>		Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有		
Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Chlordane /可氯丹	57-74-9	Stockholm Convention
	Dieldrin /地特靈	60-57-1	
	4,4-dichlorodiph-enyl trichloroethane (DDT) /滴滴涕	50-29-3	
	Toxaphene (Campechlor) /毒殺芬	8001-35-2	
	Endrin /安特靈	72-20-8	
	Heptachlor /飛佈達	76-44-8	
	Aldrin /阿特靈	309-00-2	
	Hexachlorobenzene (HCB) /六氯苯	118-74-1	
	Mirex(Perchlordecone) /滅蟻靈	2385-85-5	

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Polychlorinated biphenyl (PCBs) / 多氯聯苯	1336-36-3 etc.		
Dioxins / 戴奧辛	1746-01-6		
Furans / 呋喃	1746-01-6		
Alpha hexachlorocyclohexane / $\alpha$ -六氯環己烷	319-84-6		
Beta hexachlorocyclohexane / $\beta$ -六氯環己烷	319-85-7		
Chlordecone / 十氯酮	143-50-0		
Hexabromobiphenyl / 六溴聯苯	36355-01-8		
Lindane(Gamma-HCH) / 靈丹	58-89-9		
Pentachlorobenzene / 五氯苯			
Perfluorooctane sulfonic acid(PFOS), its salts and perfluorooctane sulfonyl fluoride(PFOSE) / 全氟辛烷磺酸、其鹽類和全氟辛基磺醯氟	1763-23-1 307-35-7 etc.		
<a href="#">Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether)</a> / 六溴二苯醚和七溴二苯醚(商用八溴二苯醚)	68631-49-2 207122-15-4 446255-22-7 207122-16-5		
<a href="#">Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether)</a> / 四溴二苯醚和五溴二苯醚(商用五溴二苯醚)	40088-47-9 32534-81-9		

### Annex附表44. Pentachlorobenzene 五氯苯

Substance : Pentachlorobenzene 物質名稱：五氯苯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表45. Hexachlorobuta-1, 3-diene 六氯-1,3-丁二烯

Substance : Hexachlorobuta-1, 3-diene 物質名稱：六氯-1,3-丁二烯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses 各式用途。	Already prohibited

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		立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表46. Perfluoroalkylsulfonates (PFASs) (excluding PFOSs and PFOSF) 全氟烷基磺酸鹽(PFAS)(不含PFOSs和PFOSF)

Substance : Perfluoroalkylsulfonates (PFASs) (excluding PFOSs and PFOSF) 物質名稱：全氟烷基磺酸鹽(PFAS)(不含PFOSs和PFOSF)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses 各式用途。	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 47. Perfluorooctane sulfonic acid(PFOS), its salts and perfluorooctane sulfonyl fluoride(PFOSF) 全氟辛烷磺酸、其鹽類和全氟辛基磺酰氟

Substance : Perfluorooctane sulfonic acid(PFOS), its salts and perfluorooctane sulfonyl fluoride(PFOSF) 物質名稱：全氟辛烷磺酸、其鹽類和全氟辛基磺酰氟		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• Materials and preparations containing PFOS with concentration of 0.005 % or more by mass. 物料和準備中物料中PFOS含量在0.005WT%以上。</li> <li>• Half-completed products, products, and components containing PFOS with concentration of 0.1% or more by mass. 半成品、成品和零件中PFOS含量在0.1WT%以上。</li> <li>• Photoresists or anti reflective coating for photolithography processes 用於半導體黃光製程中之光阻劑或抗反射層</li> <li>• All uses except those specified in Exemption and above 除上述項目及排外項目以外的各式用途。</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>• Photographic coatings applied to films, paper or printing plates 攝影印刷工業用底片，紙張或印刷板之感光劑或顯影劑</li> <li>• Mist suppressants for non-decorative hard chromium(VI) plating 非裝飾性質之硬鉻電鍍所用之鉻霧抑制劑</li> </ul>	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Maximum permissible concentration 許可濃度限值	Not Detected 不得檢出
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### Annex 附表 48. Ozone depleting substances 臭氧層破壞物質

Substance : Ozone Depleting Substances (CFCs, HCFCs, HBFCs, Halons) 物質名稱：臭氧層破壞物質 (CFCs, HCFCs, HBFCs, Halons)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 49. Perfluorocarbon and Sulfur hexafluoride, PFCs and SF<sub>6</sub> 全氟碳化物及六氟化硫

Substance : Perfluorocarbon and Sulfur hexafluoride, PFCs and SF <sub>6</sub> 物質名稱：全氟碳化物及六氟化硫		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses except those specified in Controlled Level. 除管制等級以外的各式用途</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>Octafluorocyclobutane(C<sub>4</sub>F<sub>8</sub>), Decafluorobutane(C<sub>4</sub>F<sub>10</sub>), Trifluoromethane(CHF<sub>3</sub>), Tetrafluoromethane(CF<sub>4</sub>), Hexafluoroethane(C<sub>2</sub>F<sub>6</sub>), Octafluoropropane(C<sub>3</sub>F<sub>8</sub>), Nitrogen trifluoride(NF<sub>3</sub>) used in CVD &amp; Etch processes and chamber clearing. Octafluorocyclobutane(C<sub>4</sub>F<sub>8</sub>), Decafluorobutane(C<sub>4</sub>F<sub>10</sub>), Trifluoromethane(CHF<sub>3</sub>), Tetrafluoromethane(CF<sub>4</sub>), Hexafluoroethane(C<sub>2</sub>F<sub>6</sub>), Octafluoropropane(C<sub>3</sub>F<sub>8</sub>), Nitrogen trifluoride(NF<sub>3</sub>)使用於CVD &amp; Etch製程及反應槽清洗</li> <li>Sulfur hexafluoride(SF<sub>6</sub>) used in CVD &amp; Etch processes, ball preparation for WLCSP and assembly process. Sulfur hexafluoride(SF<sub>6</sub>) 使用於CVD &amp; Etch製程、WLCSP之ball</li> </ul>	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

	preparation和assembly process • Galden used in reliability testing, chiller, maintenance, cooling liquid Galdden使用於可靠度測試、chiller、保養及冷卻液	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表50. Hydrofluorocarbons (HFCs) 氫氟碳化物

Substance : Hydrofluorocarbons (HFCs) 物質名稱：氫氟碳化物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	• All uses except those specified in Controlled Level. 除管制等級以外的各式用途	Already prohibited 立即禁止使用
Controlled Level 管制等級	• Trifluoromethane(CHF <sub>3</sub> ) used in CVD & Etch processes and chamber clearing. Trifluoromethane(CHF <sub>3</sub> )使用於CVD & Etch製程及反應槽清洗	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表51. Chlorinated hydrocarbons ( CHCs ) 氯化碳氫化合物

Substance : Chlorinated hydrocarbons ( CHCs ) 物質名稱：氯化碳氫化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Controlled Level 管制等級	• All uses except substances had listed in Annex 21. 除列於附表21的物質以外之各式用途	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表52. Methyl bromide 溴化甲烷

Substance : Methyl bromide
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## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

物質名稱：溴化甲烷		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 53. Asbestos 石棉

Substance : Asbestos 物質名稱:石棉		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses (e.g. insulators and fillers) 各式用途(如絕緣材、填充材等)</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected ( or Negative) or Not contained 不得檢出(或陰性)或不得含有	

### Annex 附表 54. Azo compounds 偶氮化合物

Substance : Azo dyes/Colorant compounds 物質名稱：特定偶氮化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses. 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Benzidine and its salts	92-87-5	76/769/EEC, 2002/61/EEC, 2003/03/EEC
	4-Aminodiphenyl and its salts	92-67-1	
	4-chloro-2-methylaniline	95-69-2	
	2-Naphthylamine and its salts	91-59-8	
	o-Aminoazotoluene	97-56-3	
	2-Amino-4-nitrotoluene	99-55-8	
	p-Chloroaniline	106-47-8	
	2,4-Diaminoanisole	615-05-4	
	4,4'-Diaminodiphenylmethane	101-77-9	
	3,3'-Dichlorobenzidine	91-94-1	
	3,3'-dimethoxybenzidine	119-90-4	
	3,3'-Dimethylbenzidine	119-93-7	
	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	
	5-Methyl-o-Anisidine	120-71-8	
	4,4'-diamino-3,3'-dichlorodiphenylmethane	101-14-4	
	4,4'-Oxydianiline	101-80-4	
	4,4'-thiobisbenzenamine	139-65-1	
	o-Toluidine	95-53-4	
	2,4-diaminotoluene	95-80-7	
2,4,5-Trimethylaniline	137-17-7		
o-Aminoanisole	90-04-0		
4-Aminoazobenzene	60-09-3		

### Annex 附表 55. Formaldehyde 甲醛

Substance : Formaldehyde 物質名稱：甲醛		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>The wooden products made from fiberboard, particleboard, or plywood, which are employed in packaging materials for deliver to customer or export to other countries.(e.g. pallet, etc.) 使用木工產品(如纖維板、木屑板或夾合板等)製成包裝材料須運送至客戶或出口至其他國家者(如木棧板等)。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 56. Phosphorus and its compounds 磷及磷化合物

Substance : Phosphorus and its compounds 物質名稱：磷及磷化合物		
	Targets 對象	Delivery prohibited date 禁止使用時間

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Red Phosphorous and Yellow Phosphorous in all uses.( e.g. Red Phosphorous used in flame retardants) 紅磷及黃磷的各式用途 (如紅磷用於阻燃劑)</li> <li>Tris (2,3 dibromopropyl) phosphate and Tris(aziridiny)phosphin-oxide in all uses. 三(2,3-二溴丙基)-磷酸酯和三氯丙啶基氧化磷的各式用途</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>Dopant in semiconductor manufacture. 半導體製造過程中磷之離子植入製程</li> <li>Organophosphorus compound used in CVD process. CVD製程中使用之有機磷化合物</li> <li>All uses except those specified in above and Prohibited Level. 除上述項目及禁用等級以外的各式用途。</li> </ul>	
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 57. Phthalates 鄰苯二甲酸鹽

Substance : Phthalates 物質名稱：鄰苯二甲酸鹽			
	Targets 對象		Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>Phthalates (e.g. DEHP, DBP, BBP, DINP, DIDP, DNOP, DNHP, DMEP, etc.) in all uses 鄰苯二甲酸鹽(如DEHP, DBP, BBP, DINP, DIDP, DNOP, DNHP, DMEP等)各式用途。</li> </ul>		Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有		
Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	76/769/EEC, 1907/2006/EC, 276/2010/EC, Others
	Di-n-butyl phthalate (DBP)	84-74-2	
	Butyl benzyl phthalate (BBP)	85-68-7	
	Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	
	Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	
	Dinonyl phthalate (DNOP)	117-84-0	
	Di-n-hexyl phthalate (DNHP)	84-75-3	
	Dimethoxyethyl phthalate (DMEP)	117-82-8	
	Others	----	

### Annex 附表 58. Radioactive substances 放射性物質

Substance : Radioactive substances
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## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

物質名稱：放射性物質		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 59. Polycyclic Aromatic Hydrocarbons (PAHs) 多環芳香烴

Substance : Polycyclic Aromatic Hydrocarbons (PAHs) 物質名稱：多環芳香烴			
	Targets 對象		Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>		Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有		
Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Naphthalene (Nap)	91-20-3	76/769/EEC, LMBG/German
	Acenaphthylene (AcPy)	208-96-8	
	Acenaphthene (Acp)	83-32-9	
	Fluorene (Flu)	86-73-7	
	Phenanthrene (PA)	85-1-8	
	Anthracene (Ant)	120-12-7	
	Fluoranthene (FL)	206-44-0	
	Pyrene (Pyr)	129-00-0	
	Chrysene (CHR)	218-01-9	
	Benzo[a]anthracene (BaA)	56-55-3	
	Benzo[b]fluoranthene (BbF)	205-99-2	
	Benzo[k]fluoranthene (BkF)	207-08-9	
	Benzo[a]pyrene (BaP)	50-32-8	
	Dibenzo[a,h]anthracene (DBA)	53-70-3	
	Indeno[1,2,3-cd]pyrene (IND)	193-39-5	
	Benzo[ghi]perylene (BghiP)	191-24-2	

### Annex 附表 60. Bisphenol A/ Bisphenol F 雙酚 A/雙酚 F

Substance : Bisphenol A/ Bisphenol F 物質名稱：雙酚A/雙酚F
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## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses (including epoxy resin intermediate) 各式用途(包含環氧樹脂的中間體)</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表61. Musk xylene 二甲苯麝香

Substance : Musk xylene 物質名稱：二甲苯麝香		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表62. Musk ketone 麝香酮

Substance : Musk ketone 物質名稱：麝香酮		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表63. Specific benzotriazole [2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole] 特定苯駢三氮唑[2-(3,5-二叔丁基-2-烴基苯基)苯駢三唑]

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Substance : 2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole 物質名稱：2-(3,5-二叔丁基-2-羥基苯基)苯駢三唑		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表 64. Expanded Polystyrene (EPS) 發泡聚苯乙烯

Substance : Expanded Polystyrene (EPS) 物質名稱：發泡聚苯乙烯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All packaging materials 所有包裝材料</li> </ul>	2010/08/01
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表65. Cyanide compounds 氰化物

Substance : Cyanide compounds 物質名稱：氰化物		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex 附表66. Benzene 苯

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Substance : Benzene 物質名稱：苯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表67. 2,4,6-tri-tert-butylphenol 2,4,6-三異丁基苯

Substance : 2,4,6-tri-tert-butylphenol 物質名稱：2,4,6-三異丁基苯		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

### Annex附表68. N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine, N,N'-dixylyl-p-phenylenediamine 苯二胺

Substance : N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine, N,N'-dixylyl-p-phenylenediamine 物質名稱：苯二胺		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>• All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Annex附表69. Dimethylfumarate (DMF) 富馬酸二甲酯(DMF)

Substance : Dimethylfumarate (DMF) 物質名稱：富馬酸二甲酯(DMF)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

Annex附表70. 4-nitrodiphenyl and its salts 4-硝基聯苯及其鹽類

Substance : 4-nitrodiphenyl and its salts 物質名稱：4-硝基聯苯及其鹽類		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All uses 各式用途。</li> </ul>	Already prohibited 立即禁止使用
Maximum permissible concentration 許可濃度限值	Not Detected or Not contained 不得檢出或不得含有	

Annex附表71. REACH SVHC Candidate List (I, II & III) REACH高關切物質候選清單  
(第一批、第二批及第三批)

Substance : REACH SVHC Candidate List (I, II & III) 物質名稱：REACH高關切物質候選清單(第一批、第二批及第三批)		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>All Packaging materials, Wafer, Halogen-free Products and Related Parts (excluded manufacturing process) 各式包裝材料、晶片、無鹵產品和相關零組件(不含製造過程)</li> </ul>	Already prohibited 立即禁止使用
Controlled Level 管制等級	<ul style="list-style-type: none"> <li>All materials except those specified in Prohibited Level. (excluded manufacturing process) 除上述禁用等級以外的所有物料(不含製造過程)</li> </ul>	

## List of hazardous substances controlled by ProMOS 茂德有害物質管制清單

Maximum permissible concentration 許可濃度限值	1000ppm		
Reference 參考	Chemicals 化學物質	CAS No. 化學文摘社登記號碼	Laws and regulations 管制法規
	Anthracene [蒽]	120-12-7	76/769/EEC
	4,4'- Diaminodiphenylmethane (MDA) [4,4'- 二胺基二苯甲烷]	101-77-9	
	Dibutyl phthalate (DBP) [鄰苯二甲酸二丁酯]	84-74-2	
	Cyclododecane [環十二烷]	294-62-2	
	Cobalt dichloride [氯化亞鈷]	7646-79-9	
	Diarsenic pentaoxide [五氧化二砷]	1303-28-2	
	Diarsenic trioxide [三氧化二砷]	1327-53-3	
	Sodium dichromate, dihydrate [重鉻酸鈉]	7789-12-0	
	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) [二甲苯麝香]	81-15-2	
	Bis (2-ethyl(hexyl)phthalate) (DEHP) [鄰苯二甲酸二(乙基己基)酯]	117-81-7	
	Hexabromocyclododecane (HBCDD) [六溴環十二烷]	25637-99-4	
	Alkanes, C10-13, chloro (SCCP) [C10-13氯化石蠟]	----	
	Bis(tributyltin)oxide (TBTO) [三丁基氧化錫]	56-35-9	
	Lead hydrogen arsenate [砷酸氫鉛]	7784-40-9	
	Triethyl arsenate [三乙砷酸酯]	15606-95-8	
	Benzyl butyl phthalate (BBP) [鄰苯二甲酸丁苄酯]	85-68-7	
	Anthracene oil [蒽油]	90640-80-5	
	Anthracene oil, anthracene paste, distn. Lights [蒽油,蒽糊,輕油]	91995-17-4	
	Anthracene oil, anthracene paste, anthracene fraction [蒽油,蒽糊,蒽餾分離液]	91995-15-2	
	Anthracene oil, anthracene-low [蒽油,含蒽量少]	90640-82-7	
	Anthracene oil, anthracene paste [蒽油,蒽糊]	90640-81-6	
	Coal tar pitch, high temperature [煤瀝青,高溫]	65996-93-2	
	Acrylamide [丙烯醯胺]	79-06-1	
	Aluminosilicate, Refractory Ceramic Fibres [矽酸鋁,陶瓷耐火纖維]	----	

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Zirconia Aluminosilicate, Refractory Ceramic Fibres [矽酸鋁氧化鋯,陶瓷耐火纖維]	----		
2,4-Dinitrotoluene [2,4-二硝基甲苯]	121-14-2		
Diisobutyl phthalate [鄰苯二甲酸二異丁酯]	84-69-5		
Lead chromate [鉻酸鉛]	7758-97-6		
Lead chromate molybdate sulphate red (C.I. Pigment Red 104) [紅色鉬鉻酸鉛硫酸鹽(C.I.紅色 104)]	12656-85-8		
Lead sulfochromate yellow (C.I. Pigment Yellow 34) [黃色硫化鉻酸鉛(C.I.黃色 34)]	1344-37-2		
Tris(2-chloroethyl)phosphate [三(2-氯乙基)磷酸酯]	115-96-8		
Trichloroethylene [三氯乙烯]	79-01-6		
Boric acid [硼酸]	10043-35-3, 11113-50-1		
Disodium tetraborate, anhydrous [無水四硼酸二鈉]	1303-96-4, 1330-43-4, 12179-04-3		
Tetraboron disodium heptaoxide, hydrate [水合硼酸鈉]	12267-73-1		
Sodium chromate [鉻酸鈉]	7775-11-3		
Potassium chromate [鉻酸鉀]	7789-00-6		
Ammonium dichromate [重鉻酸銨]	7789-09-05		
Potassium dichromate [重鉻酸鉀]	7778-50-9		

### Annex附表72. Global Automotive Declarable Substance List (GADSL) 全球汽車申報物質清單

Substance : Global Automotive Declarable Substance List (GADSL) 物質名稱：全球汽車申報物質清單		
Scope 適用範圍： Apply to Subcontractors, IC/Module Suppliers 僅適用於外包商和IC/Module供應商		
	Targets 對象	Delivery prohibited date 禁止使用時間
Prohibited Level 禁用等級	<ul style="list-style-type: none"> <li>The classifications of substances are indicated as “P” and “D/P” in GADSL Survey sheet. 在GADSL調查表上物質分類被標示為”P”和”D/P”者</li> </ul>	Already prohibited 立即禁止使用

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Controlled Level 管制等級	<ul style="list-style-type: none"> <li>The classifications of substances are indicated as “D” in GADSL Survey sheet. 在GADSL調查表上物質分類被標示為”D”者</li> </ul>	
Maximum permissible concentration 許可濃度限值	<ul style="list-style-type: none"> <li>Same as “Threshold” define in GADSL Survey sheet. 與GADSL調查表上的“Threshold”定義相同</li> </ul>	
Remark 備註	“GADSL Survey sheet” is listed in FQRQX-0157(Form2) & FQRQX-0161(From6) “GADSL Survey sheet”列於FQRQX-0157(表單2)及FQRQX-0161(表單6)	

Remark 備註:

### Packaging materials (examples) 包裝材料(範例)

Item 項目	Packaging material 包材名稱	Description 說明
1	Carton 紙箱	Including master carton and sub-master carton made from any materials. 包含各種材料製成的主紙箱和輔助紙箱
2	Cushion 緩衝材	
3	Protection bag, protection sheet 防護帶(布)	Such as made from foamed plastic or nonwoven fabric 泡沫塑料或不織布,氣泡袋,EPE,淋膜袋(布)
4	Plastic bag 塑料袋	PE Bag, etc. PE袋等
5	Envelope 信封	Such as used for warranty card 裝保證書的信封等
6	Tray 托盤	Tray, Blister pack 托盤, 泡殼
7	Separator, spacer, partition 隔板	Papers, EPE, EPS , etc. 紙,EPE,EPS類
8	Printing ink 印刷油墨	Used for packaging 用於包裝材料印刷的油墨
9	Adhesive tape 膠帶	Such as used for closing carton or poly bag, or, fixing or protection for removable component 用於紙箱,塑料袋封裝的膠帶
10	Staple 固定釘	Used for stapling box 用於紙箱打釘
11	Label 標籤	such as bar-code label, warrant label, etc. 條碼,警告標語等...
12	Adhesive 膠黏劑	Carton adhesion 用於紙箱膠合
13	Band 網綁帶	Such as PP band 如PP網綁帶等

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Item 項目	Packaging material 包材名稱	Description 說明
14	Pallet 棧板	Made from wood, plastic, paper etc. 木棧板, 膠合棧板, 紙棧板
15	Carrying handle 手提把	
16	Shrink film 收縮膜	
17	Indicator, Silica-gel, Clay desiccant 指示卡、矽膠、礦土乾燥劑	Such as desiccant indicator, <u>Shock indicators, Tiltwatch indicators</u> 如濕度指示卡、震盪指示卡、傾倒指示卡等