
 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 1 of 23	Rev.:30.1

CONTENTS

1	Purpose	2
2	Scope	2
3	Definitions of terms.....	2
4	Management standards for environment-related substances	4
	4-1 Delta mandatory banned substances	4
	4-2 Restrictions for battery.....	10
	4-3 Restrictions for package material.....	10
	4-4 Chemical substances information –REACH requirement	11
5	Other design requirements	11
6	Requirements for Test Report.....	12
7	Banned substances table	13
8	Reference	19

Annex 1: Materials Compliance Declaration (Template)

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 2 of 23	Rev.:30.1

1 Purpose

The purposes of this Technical Standard are as follows:

- ✧ To clarify the banned substances included in the parts and devices constituting Delta products, or substances used for Delta products.
- ✧ To thoroughly notify the above-mentioned matters to both the whole Delta and parts/ devices suppliers.
- ✧ To improve the environmental quality of the products.

2 Scope

This Technical Standard applies to the following parts/ devices constituting Delta products: electrical parts, mechanical parts, semiconductor devices, printed wiring boards (PWBs), and packaging materials/ packaging parts.


- ✧ Including assemblies such as functional units, modules, and board assemblies.
- ✧ Including attachments such as the accessories procured as parts.
- ✧ Including composing materials such as the subsidiary parts and materials managed by parts specifications.
- ✧ Including the substances used in the production processes of parts.

This Management Standard will be entered into enforcement 30 days after being published officially, unless elsewhere be stated its enforced date.

For any upcoming RoHS exemption expiration date, Delta will enforce 6 months earlier.

3 Definitions of terms

- Homogeneous materials:
Homogeneous materials are defined as materials that cannot be mechanically disjointed into different materials and are "of uniform composition throughout." Examples are plastics, laminates, alloys, molding compounds, finishes, ceramics, plating materials, etc. that are presented in the finished parts and products.
- Contained:
"Contained" means that a substance remains in parts, devices, or their materials because of addition, filling, blending, or adhesion, whether intended or not. When a substance is unintentionally contained in, or added to a product in a processing process, this situation is also regarded as "Contained." Dopants for production of semiconductor devices, etc. are not treated as "Intentionally added" if present in the devices in a very small amount.

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 3 of 23	Rev.:30.1

- Intentionally added:
"Intentionally added" means a situation where a substance is contained in the parts, devices, or their materials because of deliberate addition, filling, blending, or adhesion, in order to provide a specific characteristic, appearance, property, attribute or equality. (One contained in a natural material, which cannot be completely removed by in a refining process by adequate technical means (i.e. natural impurities); and one generated in a synthesis process, which cannot be completely removed by adequate technical means.)
- Banned substances:
Among the substances included in the parts and devices (refer to the SCOPE) or the ones used at the time of manufacturing, banned substances are those hazardous substances that are not allowed to be added intentionally and to be contaminated accidentally. The threshold limits of those banned substances are specified in any applicable test methods that are regulated in any related regulations and laws.
- MDL: Method Detection Limit.
- N.D.: Not detected/ not detectable.
- PPM, ppm: Parts per million, unit of measurement for weight percentage.
- Threshold limit:
The maximum concentration threshold of the regulated environment-related substance is allowed to be contained in homogenous level of the parts or materials constituting to Delta products due to technically irremovability of the regulated substance.
- Packaging:
Materials used to protect products from damage due to storage or transportation (e.g., boxes, shipping supplies, cushioning & foam, bags, shrink wrap, tape/ adhesives), including inks and dyes used to label packages. Reusable or returnable packaging under the control of traders or suppliers is out of this scope.
- Mechanical Plastic Part:
Plastic parts that do not internally carry an electrical signal such as housings, brackets, bezels, latches, etc. that form the basic structure of the product and/ or have mechanical functions.

4 Management standards for environment-related substances

4-1 Delta mandatory banned substances

The following restrictions are applicable to all parts, components, materials that are in scopes, except for the listed exemptions.

Table 4-1 List of Delta banned substances

Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Cadmium and cadmium compounds	-	-Plastic, rubber, paint and ink	N.D.	EU RoHS exemptions	Directive 2011/65/EU Directive (EU) 2017/2102
		-Solders	20 ppm		
		-Others	50 ppm		
Lead and lead compounds	-	-Plastic, rubber, paint and ink	50 ppm	EU RoHS exemptions	Directive (EU) 2015/863 Directive (EU) 2022/1631 Directive (EU) 2022/1632
		-Others	800 ppm		
Mercury and mercury compounds	-	All parts	N.D.	EU RoHS exemptions	China RoHS GB/T 26125
Hexavalent chromium compounds	-	-Metallic parts	N.D.	EU RoHS exemptions	
		-Others	100 ppm		
Polybrominated biphenyls (PBBs)	See Table 2	All parts	100 ppm		Directive 2011/65/EU China RoHS GB/T 39560
Polybrominated diphenyl ethers (PBDEs)	See Table 3	All parts	100 ppm (Tetra-, penta, deca-BDE n.d.)		Directive 2011/65/EU China RoHS GB/T 26125 TSCA section 6(h)
Bis (2-ethylhexyl)phthalate(DEHP)	117-81-7	All parts	1000 ppm		Directive (EU) 2015/863
Diocetyl phthalate(DOP)					
Benzylbutyl Phthalate(BBP)	85-68-7	All parts	1000 ppm		EU REACH Annex XVII
Dibutyl Phthalate (DBP)	84-74-2	All parts	1000 ppm		GB/T 39560.12-2024
Di-iso-butyl Phthalate (DIBP)	84-69-5	All parts	1000 ppm		


Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Arsenic	7440-38-2	-Solder and metal alloy	300 ppm	Arsenic and its compounds used for semiconductors, magnet filters and battery cells.	Delta policy
		-Others	50 ppm		
Asbestos	-	All parts	Not used		EU REACH Annex XVII
Bisphenol A	80-05-7	External plastics parts	1000 ppm		EU REACH Annex XVII
					Proposition 65
Benzenamine, N-phenyl-, Reaction Products with Styrene and 2,4,4-Trimethylpentene (BNST)	68921-45-9	All parts	Not used, not intentionally added		Prohibition of Certain Toxic Substances Regulations, 2012
Benzidine-Based Dyes	See Table 4	All parts	Not used		U.S. TSCA EU REACH Annex XVII
Beryllium	7440-41-7	All parts	1000 ppm	Alloy used in relay and breaker for electrical contact and spring.	Delta policy
Beryllium oxide	1304-56-9	All parts	100 ppm	Ceramics in components	Delta policy
Brominated Flame Retardants	Various	-Adaptor enclosure -Halogen-free parts see 10000-2003	Not used		Delta policy
Chlorinated flame retardant	Various	All parts	Not used		Delta policy TSCA section 6(h)
(Short-chain) Chlorinated paraffin (C _{10~13} , Cl _{≥50} wt%) (SCCPs)	Various	All parts	Not used		EU REACH Annex XVII;
					Stockholm Convention
(Medium-chain) Chlorinated paraffin (C _{14~17} , Cl _{≥50} wt%) (MCCPs)	Various	All parts	Not used		Delta policy
Cobalt dichloride	7646-79-9 7791-13-1	Package material (Desiccant)	Not used		EU REACH Annex XVII

Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Diarsenic trioxide	1327-53-3	All parts	1000ppm		EU REACH Annex XIV
Diarsenic pentaoxide	1303-28-2	All parts	1000ppm		EU REACH Annex XIV
Dibutyltin (DBT) compounds	See Table 5	All parts	1000 ppm as tin		EU REACH Annex XVII
Bis(2-methoxyethyl) phthalate	117-82-8	All parts	1000 ppm		EU REACH Annex XIV
Bis(2-propylheptyl) phthalate (DPHP)	53306-54-0	All parts	1000 ppm		Delta policy
Dicyclohexyl Phthalate (DCHP)	84-61-7	All parts	1000 ppm		Delta policy
Diethyl phthalate (DEP)	84-66-2	All parts	1000 ppm		Delta policy
Diisodecyl Phthalate (DIDP)	26761-40-0 68515-49-1	All parts	1000 ppm		EU REACH Annex XVII
Diisononyl Phthalate (DINP)	28553-12-0 68515-48-0	All parts	1000 ppm		EU REACH Annex XVII
Diisooctyl Phthalate(DIOP)	27554-26-3	All parts	1000 ppm		Delta policy
Diisopentyl phthalate (DIPP)	605-50-5	All parts	1000 ppm		EU REACH Annex XIV
Dimethyl Phthalate (DMP)	131-11-3	All parts	1000 ppm		Delta policy
Di-n-Octyl Phthalate (DnOP)	117-84-0	All parts	1000 ppm		EU REACH Annex XVII
Dinheptyl Phthalate	3648-21-3	All parts	1000 ppm		Delta policy
Di-n-hexyl phthalate (DnHP)	84-75-3	All parts	1000 ppm		Delta policy
Dinonyl Phthalate (DNP)	84-76-4	All parts	1000 ppm		Delta policy
Dipentyl phthalate (DPP)	131-18-0	All parts	1000 ppm		EU REACH Annex XIV
Diphenyl Phthalate	84-62-8	All parts	1000 ppm		Delta policy
Di-propyl Phthalate	131-16-8	All parts	1000 ppm		Delta policy
Dimethylfumarate (DMF)	624-49-7	All parts	0.1 ppm		EU 2009/251/EC EU REACH Annex XVII
Formaldehyde	50-00-0	Plywood board	0.05 ppm		Delta policy
		Wood shaving block	0.5 ppm		
Monomethyldibromodiphenyl-methane (DBBT)	99688-47-8	All parts	Not used		EU REACH Annex XVII

Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Musk Xylene	81-15-2	All parts	Not used		EU REACH Annex XIV
Musk Ketone	81-14-1	All parts	Not used		Delta policy
Musk lactone	3391-83-1	All parts	Not used		Delta policy
Nickel and its compounds	-	External chassis/ case and parts frequently handled by the user.	0.5µg/cm ² /week	-Nickel in stainless steel -Parts do not contact human skin	EU REACH Annex XVII
Natural rubber or natural latex	-	External mechanical parts	Not used		Delta policy
Pentachlorothiophenol (PCTP)	133-49-3	All parts	Not used		TSCA section 6(h)
Perchlorate	14797-73-0	All parts	0.006 ppm		JIG-101
Per- and Polyfluoroalkyl substances (PFAS)	-	All parts	Restricted, all application needs to be declared		TSCA section 8(a)
Long-chain perfluoroalkyl carboxylate (LCPFAC)	-	All parts	Not used		TSCA section 5(a)(2)
Perfluoroalkyl sulfonate	-	All parts	Not used		TSCA section 5(a)(2)
Perfluorohexane-1-sulphonic acid, its salts and related substances (PFHxS)	See table 6	All parts	Not used		POP (EU) 2019/1021 TSCA section 8(a)
Perfluorohexanoic acid (PFHxA)	See table 6	All parts	Not used		TSCA section 8(a)
Perfluorooctanoic acid (PFOA) and compounds	See Table 6	All parts	25 ppb		EU REACH Annex XVII
Perfluorooctane sulfonic acid (PFOS)	See Table 6	All parts	Not used		EU REACH Annex XVII
Phenol, Isopropylated phosphate (3:1) (PIP 3:1)	68937-41-7	All parts	Not used		TSCA section 6(h)
Polychlorinated terphenyls (PCTs)	-	All parts	Not used		EU REACH Annex XVII

Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Polycyclic Aromatic Hydrocarbons (PAHs)	See Table 7	Plastic and rubber used for external mechanical parts	1 ppm (Sum of 15 PAHs)	Parts that do not contact human skins continuously.	EU REACH Annex XVII HJ 2536-2014
Polyvinyl chloride (PVC) and PVC blends	9002-86-2 & Various	All parts	Not used	- Wire and cable assemblies - Plastic parts less than 25 grams	Delta policy
Persistent Organic Pollutants (POPs)	See Table 6	All parts	Not used		Stockholm Convention POP (EU) 2019/1021 TSCA section 6(h)
Radioactive materials	-	All parts	Not above background levels		Delta policy
Red phosphorous	7723-14-0	Used as plastic flame retardants	Not used		Delta policy
Selenium and its compounds	Various	All parts	Not used		Delta policy
Specific azo dyes	See Table 4	All parts	Not present		EU REACH Annex XVII
Specific benzotriazole: UV-320 UV-327 UV-328 UV-350	3846-71-7 3864-99-1 25973-55-1 36437-37-3	All parts	Not used		Japan CSCL EU REACH Annex XVII
Substances depleting the ozone layer (ODS)	Various	All parts and manufacturing process material	Not used		Annexes A, B, C, E of Montreal Protocol
Tetrabromobisphenol A (TBBPA)	79-94-7	All parts	Not used	Used as reactive flame retardant.	Delta policy
Tributyltin oxide (TBTO)	56-35-9	All parts	Not used		EU REACH Annex XVII
Triphenyltin compounds (TPT)	See Table 5	All parts	Not used		EU REACH Annex XVII
Tri-1-aziridinylphosphine oxide (TEPA)	545-55-1	Used as plastic flame retardant	Not used		Delta policy

Banned substances	CAS No.	Scope	Threshold Limit	Exemptions	References
Tricresyl phosphate (TCP)	1330-78-5	Used as plastic flame retardant	Not used		Delta policy
Triethyl arsenate	15606-95-8	All parts	Not used		EU REACH Annex XVII
Tris(2,3-dibromopropyl) phosphate (TDBPP)	126-72-7	Used as plastic flame retardant	Not used		Delta policy
Tris (1-chloro-2-propyl) phosphate (TCPP)	13674-84-5	Used as plastic flame retardant	Not used		EU REACH Annex XVII
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	13674-87-8	Used as plastic flame retardant	Not used		Delta policy
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	Used as plastic flame retardant	Not used		EU REACH Annex XIV
2,4,6-Tris(tert-butyl)phenol	732-26-3	All parts	Not used		Delta policy
Trixylenyl phosphate (TXP)	25155-23-1	Used as plastic flame retardant	Not used		Delta policy
Monomethyldichlorodiphenyl methane (Ugilec 121)	81161-70-8	All parts	Not used		EU REACH Annex XVII
Dichloro[(dichlorophenyl)methyl]methylbenzene (Ugilec 141)	76253-60-6	All parts	Not used		EU REACH Annex XVII


 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 10 of 23	Rev.:30.1

4-2 Restrictions for battery

Substance	Threshold limit
Cadmium	- Batteries and battery packs whose cadmium content, in proportion to each unit weight, is 0.002% or more. Exemptions: (a) Emergency and alarm systems, including emergency lighting (b) Medical equipment
Lead	-All batteries whose lead content, in proportion to their weight, is 0.004% or more.
Mercury	-All battery types whose mercury content, in proportion to their weight, is 0.0005% or more.

4-3 Restrictions for package material

Substance	Threshold limit
Cadmium	Sum of concentration levels of lead, cadmium, mercury and hexavalent chromium resulting from substances present in packaging should not exceed 100 ppm.
Lead	
Mercury	
Hexavalent chromium	
Formaldehyde	Plywood board: 0.05 ppm Wood shaving block: 0.5 ppm
Cobalt chloride	Not used
Arsenic	50 ppm
MOAH (Mineral Oil Aromatic Hydrocarbons)	1-7 ring: 0.1 % 3-7 ring: 0.0001%
MOSH (Mineral Oil Saturated Hydrocarbons)	C16-C35: 0.1 %

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 11 of 23	Rev.:30.1

4-4 Chemical substances information –REACH requirement

Based on REACH (EC 1907/2006), suppliers must have communication of information about substances identified by the European Chemical Agency (ECHA) known as the list of Substance of Very High Concern (SVHC). Suppliers must disclosure detail information for SVHC in delivered products.

All material delivered to Delta were not allowed contain Annex XVII substances, furthermore, if suppliers delivered parts to Delta contain any SVHC that is over the report threshold of 1000 ppm (substance weight/ article weight) in weight. There are several required information for communication: a) substance name, b) (CAS Registry Number), c) weight of substance, and d) concentration and applications of substance.

Please visit the website for the latest information about REACH regulated substances.

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

REACH Annex XVII < < <https://echa.europa.eu/substances-restricted-under-reach> > >

5 Other design requirements

- Avoided Gluing or soldering of different material.
- Plastic materials in covers / housing had better not be surface coated.
- All the thermoplastic parts $\geq 25\text{g}$ or $\geq 200\text{ mm}^2$ and packaging material, have to be marked in accordance to ISO 11469, and ISO 1043 -1, -2, -3, -4.

6 Requirements for Test Report

6-1 Items to be stated in Reports

(1). Pre-treatment method

Please indicate that the sample had been totally digested and dissolved. If this entry is not clear, Delta will ask the new report. Delta will not accept any “in-house” pre-treatment.

(2). Test method.

(3). Name of analysis institution and corresponding signature.

The tests must be done by 3rd party labs and have its own test lab with ISO 17025 certification.

When customers have requirements for reports tested by specific test laboratories, Delta will ask suppliers to resubmit the report again if the report was tested by other laboratories.

(4). Test date

(5). Test result (must state the detection limit)

(6). Test flowchart

(7). Photographs of the samples

(8). Accepted test methods

Substances	Method
Cadmium and cadmium compounds	IEC 62321-5
Lead and lead compounds	IEC 62321-5
Mercury and mercury compounds	IEC 62321-4
Hexavalent chromium compounds	IEC 62321-7-1 (Metal) IEC 62321-7-2 (Plastic and others)
Polybrominated biphenyls (PBBs)	IEC 62321-6
Polybrominated diphenyl ethers (PBDEs)	IEC 62321-6
Phthalates	IEC 62321-8 (Phthalate) 62321-12: (PBB/PBDE/Phthalate)
Polycyclic Aromatic Hydrocarbons (PAHs)	AfPS GS 2019:01 PAK IEC 62321-10
BFR&CFR (As bromine and chlorine)	BS EN 14582 IEC 62321-3-2
HBCDD	IEC 62321-9
BPA	IEC 62321-13
Nickel and its compounds	EN 1811
TECP	IEC 62321-11
Red phosphorous	Pyrolyzer-GC/MS
Formaldehyde	ASTM E1333/ ASTM D6007

7 Banned substances table

Table 2. List of Polybrominated biphenyls (PBBs)

Substances	CAS No.
Bromobiphenyl Ether	101-55-3
Dibromobiphenyl Ether	2050-47-7
Tribromobiphenyl	64258-03-3
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	563070-79-0; 67888-97-5
Hexabromobiphenyl	59080-40-9, 36355-01-8, 67774-32-7
Heptabrombiphenyl	6355-01-8
Octabrombiphenyl	61288-13-9
Nonabromobiphenyl	27753-52-2
Decabromobiphenyl	13654-09-6

Table 3. List of Polybrominated diphenyl ethers (PBDEs)

Substances	CAS No.
Bromobiphenyl Ether	101-55-3
Dibromobiphenyl Ether	2050-47-7
Tribromobiphenyl Ether	49690-94-0
Tetrabromobiphenyl Ether	40088-47-9
Pentabromobiphenyl Ether	32534-81-9
Hexabromobiphenyl Ether	36483-60-0
Heptabromobiphenyl Ether	68928-80-3
Octabromobiphenyl Ether	32536-52-0
Nonabromobiphenyl Ether	63936-56-1
Decabromobiphenyl Ether	1163-19-5



 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 14 of 23	Rev.:30.1

Table 4. List of banned Specific azo and Benzidine-based compounds

Substances	CAS No.
4-aminodiphenyl and its chlorides	92-67-1
4-chloro-o-toluidine	95-69-2
2-naphthylamine and its chlorides	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; 4,4'-methylenebisbenzeneamine	101-77-9
3, 3'-dichlorobenzidine	91-94-1
3, 3'-dimethylxybenzidion;	119-90-4
3, 3'-dimethylbenzidine;	119-93-7
3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0
p-cresidine	120-71-8
4, 4'-methylene-bis- (2-chloro aniline);	101-14-4
4, 4'-oxideaniline	101-80-4
4, 4'-thiodianiline	139-65-1
o-toluidine	95-53-4
2, 4-tolluylenediamine	95-80-7
2, 4, 5-trimethylaniline	137-17-7
4-aminoazobenzene	60-09-3
4-chloro-2-methylaniline	95-69-2
5-Nitro-ortho-toluidine	99-55-8
4-methoxy-m-phenylendiamine	615-05-4
o-Dianisidine	119-90-4
4,4'-Methylene-bis(2-methylaniline)	838-88-0
5-Methyl-o-Anisidine	120-71-8
4,4'-Methylenebis-(2-Chlorobenzenamine)	101-14-4
4,4'-thiobisbenzenamine	139-65-1
Toluene-2,4-Diamine	95-80-7
2,4,5-Trimethylaniline	137-17-7
o-Anisidine	90-04-0
1,3-Naphthalenedi-sulfonic acid, 7-hydroxy-8-[2-[4'-[2-(4- hydroxyphenyl) diazenyl][1,1'-biphenyl]-4-yl]diazeryl]-	117-33-9
1,3,6-Naphthalenetri-sulfonic acid, 8-hydroxy-7-[2-[4'-[2-(2- hydroxy-1-naphthalenyl)diazeryl][1,1'-biphenyl]-4- yl]diazeryl]-, lithium salt (1:3)	65150-87-0
2,7-Naphthalenedi-sulfonic acid,5-amino-3-[2-[4'-[2-(7-amino-1-hydroxy-3-sulfo-2 -naphthalenyl) diazenyl][1,1'- biphenyl]-4-yl]diazeryl]-4-hydroxy-, sodium salt (1:2)	68214-82-4

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 15 of 23	Rev.:30.1

Substances	CAS No.
2,7-Naphthalenedi-sulfonic acid, 4-amino-5-hydroxy-3-[2-[4'- [2-[2-hydroxy-4- [(2-methylphenyl)amino] phenyl]diazenyl][1,1'-biphenyl]-4-yl]diazenyl]-6-(2- phenyldiazenyl)-	72379-45-4
2,7-Naphthalenedi-sulfonic acid, 4-amino-5-hydroxy [[[substituted phenylamino]] substituted phenylazo] diphenyl]azo-, phenylazo-, disodium salt.	Accession No. 21808 CAS No. CBI (NA)
4-(Substituted naphthalenyl)azo diphenyl azo-substituted carbopolycycle azo benzene-sulfonic acid, sodium salt	Accession No. 24921 CAS No. CBI (NA)
4-(Substituted phenyl)azo biphenyl azo-substituted carbopolycycloazo benzene-sulfonic acid, sodium salt	Accession No. 26256 CAS No. CBI (NA)
4-(Substituted phenyl)azo biphenyl azo—substituted carbo- polycycle azo benzene-sulfonic acid, sodium salt	Accession No. 26267 CAS No. CBI (NA)
Phenylazoamino-hydroxynaphthalenylazobiphenylazo substituted benzene sodium sulfonate	Accession No. 26701 CAS No. CBI (NA)
[1,1'-Biphenyl]-4,4'-diamine	92-87-5
[1,1'-Biphenyl]-4,4'-diamine, dihydrochloride	531-85-1
C.I. Direct Red 28	573-58-0
C.I. Direct Black 38	1937-37-7
C.I. Direct Red 44	2302-97-8
C.I. Direct Blue 2	2429-73-4
C.I. Direct Orange 8	2429-79-0
C.I. Direct Brown 31	2429-81-4
C.I. Direct Brown 2	2429-82-5
Direct Black 4	2429-83-6
C.I. Direct Red 1	2429-84-7
C.I. Direct Brown 1:2	2586-58-5
C.I. Direct Blue 6	2602-46-2
C.I. Direct Brown 6	2893-80-3
C.I. Direct Red 37	3530-19-6
C.I. Acid Red 85	3567-65-5
C.I. Direct Green 1	3626-28-6
C.I. Direct Brown 1	3811-71-0
C.I. Direct Green 6	4335-09-5
C.I. Acid Black 94	6358-80-1
C.I. Direct Brown 27	6360-29-8
C.I. Direct Brown 154	6360-54-9
C.I. Direct Brown 74	8014-91-3
C.I. Direct Brown 95	16071-86-6


 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 16 of 23	Rev.:30.1

Table 5. list of banned Organiostannic (organotin) compounds

Substances	CAS No.
Dibutyltin oxide (TBTO)	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6
Dioctyl tin oxide	870-08-6
Dioctyltin dilaurate	3648-18-8
Bis(tri-n-butyltin) oxide	56-35-9
Triphenyltin N,N'-dimethyldithiocarbamate	1803-12-9
Triphenyltin fluoride	379-52-2
Triphenyltin acetate	900-95-8
Triphenyltin chloride	639-58-7
Triphenyltin hydroxide	76-87-9
Triphenyltin fattyacid ((9-11) salt)	18380-71-7, 18380-72-8,47672-31-1; 94850-90-5
Triphenyltin chloroacetate	7094-94-2
Tributyltin methacrylate	2155-70-6
Bis(tributyltin) fumarate	6454-35-9
Tributyltin fluoride	1983-10-4
Bis(tributyltin) 2,3-dibromosuccinate	31732-71-5
Tributyltin acetate	56-36-0
Tributyltin laurate	3090-36-6
Bis(tributyltin) phthalate	4782-29-0
Tributyltin sulfamate	6517-25-5
Bis(tributyltin) maleate	14275-57-1
Tributyltin chloride	1461-22-9



 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 17 of 23	Rev.:30.1

Table 6. List of banned POPs substances

Substance name	CAS No.
Endosulfan and its isomers	-
Heptabromodiphenyl ether (Group)	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified	-
Hexabromodiphenyl ether (group)	-
Hexachlorocyclohexanes, including lindane	-
Pentabromodiphenyl ether (group)	-
Pentachlorophenol and its salts and esters	-
Perfluorohexane-1-sulphonic acid, its salts and related substances	-
Perfluorooctane sulfonates (PFOS) C ₈ F ₁₇ SO ₂ X (X = OH, Metal salt (O-M ⁺), halide, amide, and other derivatives including polymers)	-
perfluorooctanoic acid (PFOA), its salts and PFOA-related substances	-
Polychlorinated Biphenyls (PCB)	-
Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)	-
Polychlorinated naphthalenes	-
Polycyclic aromatic hydrocarbons (PAHs)	-
Tetrabromodiphenyl ether (group)	-
Dicofol	115-32-2
Bis(pentabromophenyl) ether	1163-19-5
Hexachlorobenzene	118-74-1
Chlordecone	143-50-0
Dodecachloropentacyclo[5.2.1.0 ^{2,6} .0 ^{3,8} .0 ^{5,10}]decane	2385-85-5
Aldrin	309-00-2
Hexabromo-1,1'-biphenyl	36355-01-8
Clofenotane	50-29-3
Chlordane	57-74-9
Dieldrin	60-57-1
Pentachlorobenzene	608-93-5
Endrin	72-20-8
Heptachlor	76-44-8
Toxaphene	8001-35-2
Alkanes, C ₁₀ -13, chloro	85535-84-8
Hexachlorobuta-1,3-diene	87-68-3
Dechlorane Plus (decision SC-11/10)	13560-89-9; 135821-03-3; 135821-74-8
Methoxychlor (decision SC-11/9)	72-43-5
UV-328 (decisions SC-11/11)	25973-55-1
Long-chain perfluoroalkyl carboxylate (LC-PFAC)(C ₉ -C ₂₁) https://www.federalregister.gov/documents/2020/07/27/2020-13738/long-chain-perfluoroalkyl-carboxylate-and-perfluoroalkyl-sulfonate-chemical-substances-significant	-
Perfluoroalkyl sulfonate	-


Table 7. List of banned PAHs

Substances		CAS No.		
Naphthalene	Nap	91-20-3	HJ 2536-2014	GS
Acenaphthylene	AcPy	208-96-8	HJ 2536-2014	
Acenaphthene	Acp	83-32-9	HJ 2536-2014	
Fluorene	Flu	86-73-7	HJ 2536-2014	
Phenanthrene	PA	85-01-8	HJ 2536-2014	GS
Anthracene	Ant	120-12-7	HJ 2536-2014	GS
Fluoranthene	FL	206-44-0	HJ 2536-2014	GS
Pyrene	Pyr	129-00-0	HJ 2536-2014	GS
Chrysene	CHR	218-01-9	HJ 2536-2014	GS
Benzo[a]anthracen	BaA	56-55-3	HJ 2536-2014	GS
Benzo[b]fluoranthene	BbF	205-99-2	HJ 2536-2014	GS
Benzo[k]fluoranthene	BkF	207-08-9	HJ 2536-2014	GS
Benzo[a]pyrene	BaP	50-32-8	HJ 2536-2014	GS
Dibenzo[a · h]anthrancene	DBA	53-70-3	HJ 2536-2014	GS
Indeno[1 · 2 · 3-cd]pyrene	IND	193-39-5	HJ 2536-2014	GS
Benzo[g · h · i]perylene	BghiP	191-24-2	HJ 2536-2014	GS
Benzo(e)pyrene	BeP	192-97-2		GS
Benzo(j)fluoranthene	BjF	205-82-3		GS

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 19 of 23	Rev.:30.1

8 Reference

1. Directive 2011/65/EU, restriction of the use of certain hazardous substances (RoHS), amended by Directive 2014/1/EU, Directive (EU) 2015/863, Directive (EU) 2018/736, Directive (EU) 2018/737, Directive (EU) 2018/738, Directive (EU) 2018/739, Directive (EU) 2018/740, Directive (EU) 2018/741, Directive (EU) 2018/742, , Directive (EU)2022/279, Directive (EU)2022/280, Directive (EU)2022/281, Directive (EU)2022/283, Directive (EU)2022/287, Directive (EU)2022/275, Directive (EU)2022/282, Directive (EU)2022/274 and Directive (EU)2022/278.
4. Directive 94/62/EC on packaging and packaging waste, amending by Directive 2004/12/EC, Directive 2005/20/EC, Regulation (EC) No 219/2009, Directive 2013/2/EU.
5. Regulation (EC) No 1907/2006, Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
6. Stockholm Convention on Persistent Organic Pollutants.
7. Stockholm Convention: decision SC-11/10, decision SC-11/10, decisions SC-11/11.
8. Montreal Protocol on Substances that Deplete the Ozone Layer.
9. REGULATION (EC) No 2037/2000 on substances that deplete the ozone layer.
10. Regulation (EU) No 528/2012, making available on the market and use of biocidal products.
11. Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986.
12. EU Decision 2009/251/EC, requiring Member States to ensure that products containing the biocide dimethylfumarate are not placed or made available on the market.
13. REGULATION (EC) No 842/2006 on certain fluorinated greenhouse gases.
14. Persistent organic pollutants (POPs) RECAST REGULATION (EU) 2019/1021.
15. GB/T 39560 China RoHS testing standard.
16. SJ/T 11364-2014 Marking for the restriction of hazardous substances in electrical and electronic products.
17. Toxic Substances Control Act (TSCA)
18. Regulation (EU) 2023/1542, concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC.

 Delta Electronics, Inc.	Document name: Management Standard for Environment-related Substances			Document no. 10000-0162	
	Dept.: DEIC CE	Author: DEIC CE	Date:2025.02.13	Page: 20 of 23	Rev.:30.1

Revision history

REV.	Description	Date
25	1. Add requirement for enclosed plastic for adapters. 2. Updated RoHS exemptions expiry dates base on Directive (EU) 2018/736, Directive (EU) 2018/737, Directive (EU) 2018/738, Directive (EU) 2018/739, Directive (EU) 2018/740, Directive (EU) 2018/741, and Directive (EU) 2018/742. 3. Renew requirement for formaldehyde in plywood. 4. Move restriction on surfactants, trichloroethylene, and tetrachloroethylene to 10000-2009. 5. Add restriction on Di(2-propylheptyl) phthalate (DPHP). 6. Editorial changes.	10/05/2018
26	1. Update RoHS exemptions expiry dates to the latest status. 2. Renew control threshold of PFOA to 25 ppb, move PFOS substances to POPs list. 3. Renew restrictions on batteries. 4. Renew POPs substances list. 5. Modify formaldehyde threshold limit to 0.5 ppm for pallets and wooden boxes. 6. Add banned substances 2,4,6-Tri-tert-butylphenol and specific benzotriazole UV absorbers. 7. Update banned PAHs from 18 substances to 15.	08/20/2020
27	Added attachment.	09/01/2020
28	1. Typo correction. 2. Modify formaldehyde threshold for plywood board and wood shaving block. 3. Update table 6 for latest EU POPs regulation. (Combined PFOA and POPs table)	09/28/2020
29	1. RoHS exemption update. 2. Remove restriction on antimony, only apply to 10000-2003. 3. Update TSCA substances 4. Renew EU POPs list. 5. Adapt to new frame.	05/18/2022
30	1. RoHS exemption update. 2. Edit new threshold limit for Tetra-, penta, deca-BDE for TSCA comply. 3. Remove antimony trioxide. 4. Renew POPs list., add PFHxS, DP, UV328 and methoxychlor. 5. Add requirement for declare PFAS. 6. Remove triphenyl phosphate (TPP). 7. Renew control limit for battery. 8. Add MOSH/MOAH threshold limit to package material. 6. Renew IEC62321 test method list.	6/20/2024
30.1	1. Update China RoHS testing standard to GB/T 39560 2. Typo and table layout correction.	2/13/2025

Annex 1: Materials Compliance Declaration (Template) Total 3pages

Materials Compliance Declaration 零件環保符合性聲明書

● Compliance Declaration 環境符合性宣告

Instruction: Please fill in the information and check the following boxes of the declared parts(s).

填寫說明: 請勾選此次宣告料號/型號可符合的台達環境要求項目(可複選).

Responding Company		
Delta Vendor Code		
Delta Part Number	Supplier Name	Supplier Part Number

☐ 1. Meet Delta's Management Standards for Environment-related Substances (Delta Doc. No. 10000-0162).

符合台達環境關聯物質管理規範 (台達文件編號: 10000-0162)。

1.1 If item(s) uses one or more of the RoHS exemptions, please mark below.

零件適用RoHS 排外項目的，請勾選對應資訊。

<input type="checkbox"/> 6 (c)	Copper alloy containing up to 4 % lead by weight. 銅合金中的鉛含量不超過 4%。
<input type="checkbox"/> 7 (a)	Lead in high melting temperature type solders. 高熔點錫鉛中的鉛。
<input type="checkbox"/> 7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors. 電子電氣元件中玻璃或陶瓷材料 (電容中陶瓷介質除外) 所含的鉛。
<input type="checkbox"/> 7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher 適用於 125V 交流電或 250V 直流電壓以上的電容陶瓷產品中的鉛。
<input type="checkbox"/> Others	Other exemptions 適用其它排外條款。 其它 : _____

1.2 SVHC information SVHC 宣告資訊

☐ Not contain. 不含有。

☐ Contain SVHC, substances information listed below: 含有 SVHC，宣告資訊如下。

Substance name	Substance CAS No.	Substance concentration (ppm)

☐ 2. Meet Delta's Halogen Free Guideline (Delta Doc. No. 10000-2003). (Halogen-Free parts only)

符合台達無鹵規範(台達文件編號: 10000-2003). (僅適用於無鹵材料，有鹵材料不需勾選)

☐ 3. None of statements listed above can describe the environmental compliance of your declared subject.

Please describe your non-compliance restrictions here:

以上皆不符合，請敘述原因：

- **DECLARATION SIGNATURE 簽核欄位**

This Declaration is designed for Delta to gather information so that Delta can ensure that its products comply with status. Delta must be informed in writing of any change to the information provided in the declaration that might affect the compliance status of the above mentioned manufacturer part number(s).

By your signature below, suppliers verify that you have completed the Declaration above accurately.

此聲明書是台達用以收集廠商材料的符合性資訊，任何簽署料號的符合性的變動都必須要以書面通知台達。

依以下的簽名，供應商確認以上聲明事項正確無誤。

Signature (Authorized representative of the company) 代表簽名

Company Name 公司名稱:	
Printed Name 簽署人姓名(印刷):	
Title 簽署人職稱:	
Email:	
Phone 連絡電話:	
Address 聯絡地址:	