CASIO

CASIO GROUP

Green Procurement Standard Manual

**for Casio Products,
Components and Materials**

clean & green

This mark symbolizes all the Casio Group's activities for the environment in the 21st century.

**8th Edition
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CASIO COMPUTER CO.,LTD.

<REVISION HISTORY>

DATE	PAGE	REASON for REVISION
2000.11.1		1st issue
2004.3.1		Total revision due to issue of 4th edition
2004.4.26	7	8)Heavy metals contained in battery / Assessment / (reply "**no**" in the cell of battery ---)
2004.4.26	15	9 / A09 / Lead and its compounds / all uses (**except** battery cell ---
2005.2.1	10	The first four lines of the third paragraph are added.
2005.2.1	10	The reference is added for the metal conversion coefficient under the equation.
2005.2.1	11	The content of (2)Evaluation and Selection of Green Components is revised.
2005.2.1	11	The comments are revised for (3)Creating Survey Sheet 2 and 3.
2005.2.1	14-21	The classification and the scope to survey/ban of the chemical substances are revised.
2009.3.1	16	Threshold value for cadmium changed from 0.0075 wt% (75 ppm) to 0.01 wt% (100 ppm)
2009.3.1	16	Threshold value for shortchain chlorinated paraffins changed from 1 wt% (10000 ppm) to 0.1 wt% (1000 ppm)
2009.3.1	16	The following chemical substances changed from <Restricted substances> to <Prohibited substances> 12 Bis (tri-n-butyltin) oxide (TBTO) 13 Tributyl Tins (TBTs) and Triphenyl Tins (TPTs) 14 Polychlorinated naphthalenes (3 or more chlorine atoms) 15 Shortchain chlorinated paraffins (C10-13) 16 Radioactive substances
2009.3.1	16	The following chemical substances were added as new <Prohibited substances>: 27 PFOS and its salts 28 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol
2009.3.1	18	Tables 1 and 2 provide a summary of the prohibited substances in batteries and packaging materials.
2009.3.1	29	Table 3 lists the uses that are exempted from prohibitions on the inclusion of substances, and also shows new additional information on those exempted uses.
2011.10.1	1	Replace "Casio Environmental Charter/Environmental Policies" with "Casio Environmental Vision/Casio's Environmental Declaration".
2011.10.1	8	“heavy metals included in packaging materials” is changed.
2011.10.1	16	The prohibited uses of prohibited substances, the thresholds and the relevant laws and regulations are revised.
2011.10.1	16	"Tributyl Tins (TBTs) and Triphenyl Tins (TPTs)" renamed as "Trisubstituted Organotin Compounds".
2011.10.1	17, 24	Restrictions on the amount of mercury included in batteries are added. 29. Dimethylfumarate(DMFu) 30. Dibutyltin (DBT) compounds, Dioctyltin (DOT) compound
2011.10.1	18	Restrictions on the amount of mercury included in batteries are added.
2011.10.1	19	Denominator of the threshold for prohibited substances included in packaging materials is changed.
2011.10.1	27 - 30	Exempted applications for prohibited substances are changed.
2013.4.5	12, 13, 31	E-mail address is changed.
2015.4.1	1	Casio Environmental Vision and Casio Environmental Declaration are updated to the latest versions.
2015.4.1	15	Threshold value for leather is added for "hexavalent chromium compounds".
2015.4.1	15	Threshold value for "Lead and its compounds" changed.
2015.4.1	17, 24	The following chemical substances are added as new <Prohibited substances>: 31. Hexabromocyclododecane (HBCD) 32. PFOA and individual salts and esters of PFOA 33. Polycyclic aromatic hydrocarbons (PAHs) 34. Specific phthalates (DEHP, DBP, BBP, DIBP)
2015.4.1	17, 27	In Substances for Reduction, "Phthalates" is changed to "Phthalates (except DEHP, DBP, BBP and DIBP)".

* Revision parts of this edition of this manual are written by the blue.

Index

Chapter 1 The Casio Group Concept of Environmental Preservation

Casio has set its sights firmly on 2050 as a long-term objective, and is helping to build a sustainable society by formulating the new "Casio Environmental Vision" and promoting activities to realize that vision.

Casio Environmental Vision 2050

With a target year of 2050, the Casio Group will create and implement its own visionary initiatives to promote the sustainable use of energy and resources and facilitate the healthy coexistence of all living things, the planet's greatest assets.

Casio's aim is to become a leading environmental company that contributes not only to a sound and sustainable global environment but also to the spiritual richness of people's lives. Casio's unique way of achieving this is by creating new value and lifestyle possibilities that give rise to markets and cultural phenomena never seen before.

To become a leading environmental company, Casio will apply its spirit of going from "0" to "1," or creating "something" from "nothing," to develop unique environmental initiatives and create products and services that make the most of its innovative ideas and leading technologies, focusing in particular on the following areas:

- Realizing a low-carbon society
- Building a recycling society
- Living in harmony with nature

Casio Environmental Declaration 2020

Action guidelines for 2020

1. Realizing a low-carbon society
The Casio Group will provide products and services that make an even greater contribution to the reduction and absorption of CO_2 emissions. In addition to expanding products and services that use energy sources that are friendly to people and the planet, including solar, wind, and hydro power, Casio will incorporate these renewable energy sources into its own business operations.

2. Building a recycling society
The Casio Group intends to further enhance resource productivity through the efficient use of water and other precious resources of the planet, including the reuse of resources and the utilization of alternate materials.

3. Living in harmony with nature
The Casio Group is promoting awareness of the need to take care of the planet through biodiversity preservation activities, while working to achieve harmony between business activities and the cycles of nature.

Chapter 2 Promotion of Casio Group Green Procurement Activities

To aggressively procure products, components and materials with minimal environmental impact, the Casio Group will make overall decisions based on environmental load in addition to evaluations on quality, cost, delivery and service.

Environmental evaluations are based on the following two green procurement standards:
1. Green Suppliers: Suppliers that have established and maintain an environmental management system.
2. Green Components: Products, components and materials with low environmental impact (implementation of environmental assessment).

The Casio Group prioritizes the procurement of Green Components from Green Suppliers as a fundamental concept in green procurement, and will follow guidelines in this manual.

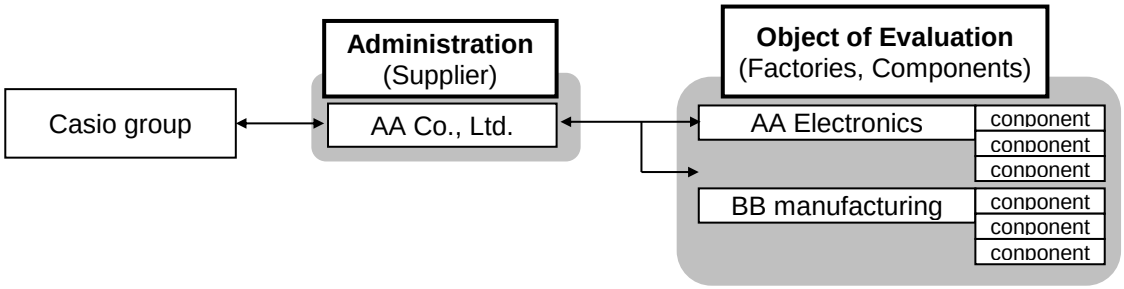
[1] Scope of Green Procurement Standard Manual

Applies to all levels of the Casio Group
This manual applies to all domestic and overseas facilities and Group companies.

Scope of Applicable Products, Components and Materials
The manual applies to all Casio products as well as components and materials (including sub-materials) that comprise products. Equipment and such office supplies such as stationary are not considered applicable in the manual. The Casio Group has established a separate set of standards for purchasing equipment and office supplies.

Administration and Object of Evaluation of Green Procurement Standards
Administration :
Administration : We ask that the green procurement standards described in this manual be administered by the suppliers that
Object of Evaluation : conduct direct business with the Casio Group.

We ask that suppliers to evaluate Environment Management System as organization in "Green Factory Evaluation List" descrived later, object of evaluation is factory which produces components.
Evaluated factory is that have final process and ships components.
Supplier doesn't have to evaluate factory that have only previous process.
If supplier have business with plural factories, all of them are objects to evaluate.



Chapter 2

[2] Preferential Procurement from Green Factories

The Casio Group prioritizes procurement from Green Factories that have established and maintain environmental management systems.
In the establishment and maintenance of environmental management systems, we prefer suppliers to acquire ISO 14001 certification. We request factories without planning that do not plan to acquire ISO 14001 certification, to establish and maintain environmental management systems independently through an appropriate organization in their country.

(1) Evaluation Items for Green Factories
We would like to ask suppliers to evaluate the results of their independently established and maintained environmental management systems using the following conditions:
(The numbers displayed to the right indicate the points attributed to either a yes or no answer.)

1) For a factorie that has acquired or is in the process of acquiring ISO 14001 certification [YES / NO]

(a) Has acquired certification ･･･[100 pt / 0 pt]

(b) Will acquire certification within one year ･･･ [90 pt / 0 pt]

Note: Proceed to Evaluation and Selection of Green Factory if either (a) or (b) applies

2) For a supplier that has made independent efforts

(c) An environmental preservation committee or similar organization exists with a clear agenda - - - [10 pt / 0 pt]

(d) Top management participates in the above organization - - - [10 pt / 0 pt]

(e) An environmental policy and an environmental action plan is established, and efforts are underway - - - [10 pt / 0 pt]

(f) The environmental regulations are complied with, and reviews are held regularly - - - [20 pt / 0 pt]

(g) No harmful substances as below are used in manufacturing processes that cause depletion of the ozone layer, soil pollution or global warming - - - [10 pt / 0 pt]

Note: It is exempted that harmful substances are used in closed condition, such as coolant in refregerator. If below substances are used in manufacturing process and discharge in environment, the factory cannot get point at this item.

Harmful substances	
CFCs	tetrachloroethylene
1,1,1-trichloroethane	methyl chloride
carbon tetrachloride	SF6
halons	HFCs
HCFCs	PFCs
trichloroethylene	

(h) Has not received instructions related to environment from or been penalized by relevant inspection authorities in this 5 years ・・・ [20 p t/ 0 pt]

(i) Able to disclose their environmental preservation activities outside the company ・・・ [10 pt / 0 pt]

(j) Educates employees about environmental preservation ・・・ [10 pt / 0 pt]

(2) Evaluation and Selection of Green Factories

Evaluation: Companies are ranked from SV to CV according to their scores in the Green Factory evaluation.
Selection: Factories ranked SV and AV are given preference in procurement.

Green Factory Ranking

Rank	Total Evaluation Points	Selection Standards
SV	100	Preferred factory
AV	70 - 90	
BV	30 - 60	Request for improvement
CV	20 or less	Withhold new adoption

[3] Preferential Procurement of Green Components

We request that suppliers independently conduct product assessment of their products, components and materials.
Casio continues to commercialize Eco Products by prioritizing the employment of products, components and materials (Green Components) with minimal impact on the environment.

Note: Definition of Product Assessment
Product assessment aims to reduce environmental load by evaluating the impact of products in the product development and design stages, concerning purchasing component and materials, production, distribution, use, recycling and waste management, and recycling and waste management, and changing the product design as necessary.

(1) Assessment Items of "Green Components"

The assessment items of "Green Components" are as follows.
There are various assessment items, and answers are different depending on the items.
Please confirm the assessment items in the next page and thereafter with thorough comprehension of the entire contents.

Assessment Items	Content, Method of Reply	Reply Form
(1) Materials	Reply consideration of components on environment by Y(Yes) / N(no)	Fill survey sheet 2/3 (Refer to the "Survey Sheet Input Guide" provided
(2) Easy of disassembly		
(3) Resource Conservation		
(4) Energy saving		
(5) Packaging		
(6) No use of Ozone Deplating Substances		
(7) Content of mercury	Quantitatively fill the content of mercury	
(8) Heavy metals contained in battery	Reply by Y(Yes) when the contents of mercury in batteries and packages are below regulations, and N(No) when exceeding.	
(9) Heavy metals contained in packaging compinent		
(10) Contained chemical substances	Report the content (wt%) of chemical substances for every constituting materials of components independently from assessment item (7)	Fill survey sheet 3/3 (Refer to the "Survey Sheet Input Guide" provided

Chapter 2

Evaluate the results of product assessment on the commodities purchased by CASIO according to the following items.
(The numerical point at the right in the following items represents an assessment point of Yes/No)

The ranges of assessment of components are described in the parenthesis in each assessment items.

Reply as Y(Yes) with respect to the components out of the range of assessment.

* We request to follow the assessment items as much as possible even for the components out of the range of assessment.

1) Materials

Assessment object: articles delivered to CASIO containing plastic members with an weight of 25 g or more or an area of 200 mm2 or more (reply as Yes when not applicable)

Recycled material or materials capable of readily recycled are used for plastic members with an weight of 25 g or more or an area of 200 mm^2 or more as much as possible, the kinds of the materials are reduced as small as possible and standardized as much as possible, and the name of the materials are expressed. ・・・ [10 pt / 0 pt]

2) Ease of disassembly

Assessment object: articles delivered to CASIO containing plastic or metal members with an weight of 25 g or more (reply as Yes when not applicable)

Recycled plastic or metal materials are used for plastic or metal members with an weight of 25 g as much as possible, and the structures of the members are able to be disassembled into materials capable of recycling. ・・・ [10 pt / 0 pt]

3) Resource conservation

Assessment object: articles delivered to CASIO containing plastic or metal members with an weight of 25 g or more (reply as Yes when not applicable)

The products and components are made small size and light weight as much as possible depending on the purpose of uses. ・・・ [10 pt / 0 pt]

4) Energy conservation

Assessment object: all articles delivered to CASIO

Endeavoring to develop energy saving products and components, or to reduce the energy in the production process. ・・・ [10 pt / 0 pt]

5) Packaging

Assessment object: all articles delivered to CASIO

Packaging components are constructed so as to enable repeated uses as much as possible, and are trying to be able to recycle and reuse. Restorable or recycled materials are used for saving resources, and no polyvinyl chloride is used. The name of the plastic package material is marked by a method that can be hardly erased. ・・・ [10 pt / 0 pt]

6) No use of Ozone Depleting Substances (Class I)

Assessment object: all articles delivered to CASIO

No Ozone Depleting Substances (Class I) are used in the production process. ・・・ [10 pt / 0 pt]

* Check Appendix 2 of this document for a detailed list of ozone depleting substances (class I).
Materials used in a hermetic environment such as CFC in refrigerators and halons in fire extinguishers are excluded.
The object of this assessment is the chemicals used in the production process of the components in concern and discharged in the environment.

7) Content of mercury

Assessment object: all articles delivered to CASIO

Report the content of mercury in weight (in mg unit) when mercury is intentionally added in the product delivered to CASIO. Fill "0 (zero)" when

** "Intentionally add" means to add mercury for controlling characteristics, appearance and quality of the components by taking advantage of chemicals. Mercury having no possibility to remain in the articles delivered to CASIO by evaporation and reaction is not considered to be "intentionally added" even when the chemicals are used in the production process.*

** We request report of the total amount (mg) of mercury as well as the concentration(wt%) for each material constituting the components.(product assessment item (10))*

8) Heavy metals contained in battery

Assessment object: articles delivered to CASIO including batteries (reply "No" in the cell of "battery" when no batteries are used).

The weight of mercury should be less than the criteria below when the article delivered to CASIO contains batteries. ・・・ [10 pt / 0 pt]

Criteria: batteries other than button cells ···· 0.0005% mercury of the weight of the battery cell
button cell battery ···· 2% mercury of the weight of the battery cell

Reply "Y" when the contents of lead and cadmium are less than the criteria below, and "N" when the contents exceed the proportions below.

Criteria: lead ···· 0.4% lead of the weight of the battery cell
cadmium ···· 0.025% cadmium of the weight of the battery cell

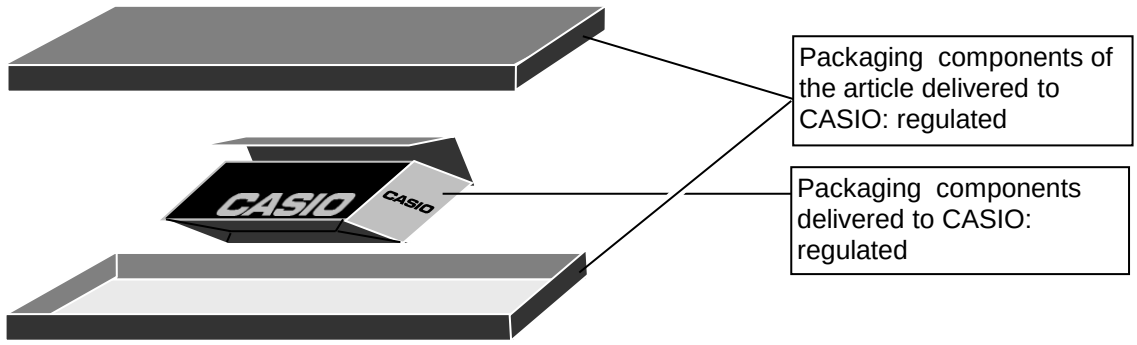
9) Heavy metal contained in packaging compoinents

Assessment object: Packaging components of articles delivered to CASIO including the packaging components themselves.

The contents of heavy metals should be below the following criteria in the packaging components of articles and package materials delivered to CASIO. ・・・ [10 pt / 0 pt]

Criteria: The total weight of lead, mercury, hexavalent chromium or cadmium should be 0.01% by weight for each of the homogeneous materials (base material, ink, adhesive, etc.) that make up the packaging materials.

$$\text{Inclusion rate for packaging materials} = \frac{\text{Weight of the 4 substances (total value) included in homogeneous material of the packaging material}}{\text{Weight of homogeneous material of the packaging material}}$$



10) Chemical substances contained in the article

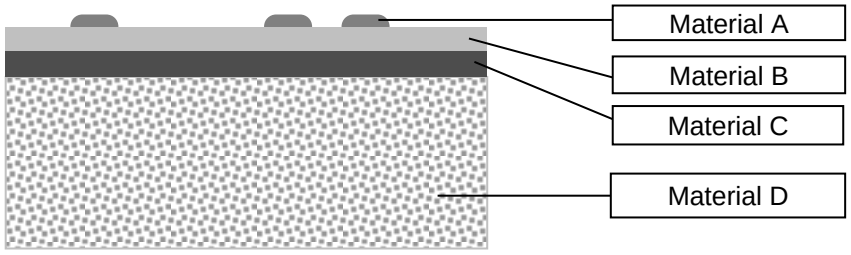
Assessment object: all articles delivered to CASIO

Survey the chemical substances contained in the articles delivered to CASIO, and report the results.

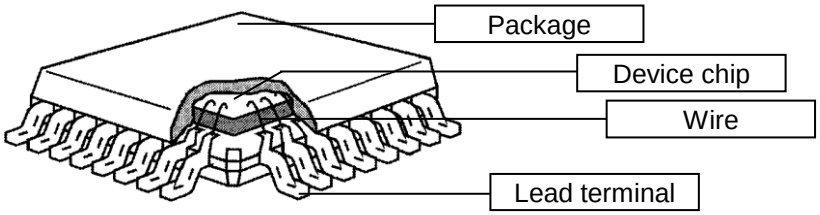
- The chemical substances to be surveyed are listed in "List of Chemical Substances for CASIO Green Procurement" in Appendix 1 and Appendix 2. The substances are classified into the two categories shown below according to their control levels.

Bunned Substances	Delivery of components containing these chemical substances are immediately prohibited
Substances for Reduction	Confirm the present conditions of components containing these chemical substances, and try to reduce the content of these chemical substances.

- Numerical values of the concentration (unit: wt%) of the chemical substances per "homogeneous material" constituting the part delivered to CASIO should be surveyed and reported. Materials containing evenly mixed substances are named as "homogenous material". For example, respective materials A to D are considered "homogeneous materials". Plated and coated films are considered to be independent materials.
  Oxide layers and nitride layers formed on the surface of metals are considered to be the same materials as the substrate metals.



- In the case of electronic parts, we request to investigate and report the content of chemicals for each homogeneous material such as metals, plastics, ceramics and glass. Solders for internal joints, inks for surface printing and plating materials may be considered as independent materials.



- The consentration of chemical substances should be reported by significant figures in two digits.

- When the concentration of chemical substances is not uniform, as when fabrication is by multiple plants, report the guaranteed maximum value.

- When the threshold is defined as "xx wt%", report the concentration of the substances irrespective of intentionally or unintentionally added (report including unintentionally mingled impurities). Report the concentration of intentionally added chemical substances when the threshold is expressed as "intentionally added".

** Chemical substances contained in the material include those intentionally added and impurities unintentionally added. "Intentionally added" means that the chemical substances are added for controlling characteristics, appearance and quality of the part by taking advantage of the substances. Substances not remaining in the articles delivered to CASIO by evaporation and reaction are not considered to be "intentionally added", even when the substances are used in the production process.*

- Even though the concentration of the substances is with the threshold or less, report the concentration of intentionally added chemical substances if any. Report is not required when there are no intentionally added chemical substabces and the concentration of the chemical substances is evidently less than the threshold.
  Where none of the substances being surveyed are present in amounts that exceed the threshold values, report that none of the chemical substances are present.

** Correspondence based on a different standard from the standard of CASIO Green Procurement may be requested in specified products for management of survey of chemicals, and prohibition and abolishment.*

(2) Evaluation and Selection of Green Components

Assessment and Preferential Procurement on Green Components will be determined, for the time being, in terms of
content of the chemical substances as the first priority and Green Component Evaluation ranking as the second priority.

[4] Request for Suppliers

We repeatedly request the suppliers to collaborate surveillance of CASIO Green Procurement.

● Compliance with the EU REACH Regulation

Under the EU REACH regulations, the provision of content information is stipulated for chemical substances on the SVHC (Substances of Very High Concern) candidates list.

ECHA (European Chemicals Agency) SVHC Candidates List

http://echa.europa.eu/chem_data/candidate_list_table_en.asp

If you are aware of chemical substances on the above list contained in the materials or components you supply, please notify Casio at the following address:

casio_green_procurement@casio.co.jp

Chapter 3 Others

- This manual shall be revised as necessary in accordance with changes in society, advancements in technology and access to new information.
- We ask for your cooperation should we request permission to disclose certain environmental information you possess in line with the aims of this manual.
- Please refer questions regarding this manual to CASIO purchasing division.

CASIO Green Procurement E-mail: casio_green_procurement@casio.co.jp

Appendix 1

【List of Chemical Substances Group for CASIO Green Procurement】

This list includes chemical substances as objects of surveillance of content in CASIO products. The chemicals as the object of surveillance are classified into two groups depending on their control level.

Prohibited Substances	Delivery of components containing these substances more than the threshold are immediately prohibited
Substances for Reduction	Confirm the present conditions of components containing these substances, and try to reduce the content of these substances.

The "JGPSSI Classification No." in the following table corresponds to the classification No. defined by JGPSSI (Japan Green Procurement Survey Standardization Initiative).

Refer to the detailed list of the examples of the substances with respect to "Chemical Substances for CASIO Green Components (detailed)" in Appendix 2.

[Prohibited Substance Groups]

Delivery of components containing these chemical substances more than the threshold are prohibited.

Sub-stance group No.	Name of chemical substances group	Prohibited use	Delivery banned date	Threshold	Related legal restriction	Effect on human body, ecosystem and global environment	General use
1	**Polybrominated biphenyl** (PBBs)	all uses	imme-diate	0.1wt% (1000ppm)	RoHS Directive	carcinogen, reproductive toxicity, generation of dioxin upon combustion	flame retardant
2	**Polybrominated diphenylether** (PBDEs)	all uses	imme-diate	0.1wt% (1000ppm)	RoHS Directive REACH Reg.	generation of dioxin upon combustion	flame retardant
3	**Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs)**	all uses	imme-diate	0.005wt% (50ppm)	REACH Reg., POPs Convention	carcinogen, oral toxicity	insulation oil of transformer and capacitor, pressure sensitive copy paper
4	**Asbestos**	all uses	imme-diate	Intentional addition	REACH Reg.	carcinogen, inhalation toxicity	fillers of paper/textile/rubber/plastics, pigment in paint, heat insulating material, electric insulator
5	**Ozone depleting substances**	all uses	imme-diate	Intentional addition	Montreal Protocol, Air Clean Law of USA	destruction of ozone layer	refrigerant foaming agent detergen tfire extinguisher
6	**Pentachlorophenol** (Objects of surveillance shall be wooden articles, leather and natural fiber, only.)	wooden articles, leather, natural fiber	imme-diate	0.0005wt% (5ppm)	German Chemicals Prohibition Ordinance	inhalation toxicity, oral toxicity	antiseptic insecticide (Items other than wooden articles, leather and natural fiber are out of surveillance objects.)
7	**Cadmium and its compounds**	All uses (excluding batteries, packaging materials and exempted uses (Appendix 3))	Immedi ate	0.01 wt% （100 ppm）	REACH Reg., RoHS Directive	Carcinogenicity , oral toxicity	Pigments, alloys, plating, PVC stabilizers, thick-film resistors in potentiometers, electrical contacts (relays, switches, fuses, motors, etc.), fluorescent materials, electrodes, solder
		Batteries (including storage batteries)	See Table 1	See Table 1	See Table 1		See Table 1
		Packaging materials	See Table 2	See Table 2	See Table 2		See Table 2

Appendix 1

8	**Hexavalent chromium compounds**	All uses(excluding leather and packaging materials)	Immediate	0.1 wt%（1000 ppm）	RoHS Directive	Carcinogenicity, oral toxicity	Abrasives, pigments, photoengraving, plating, catalytic agents, paint driers
		Leather	1 Oct, 2015	0.0003 wt%（3 ppm）in leather part	REACH Reg.		leather tanning agents
		Packaging materials	See Table 2	See Table 2	See Table 2		See Table 2
9	**Lead and its compounds**	All uses (excluding batteries, packaging materials and exempted uses (Appendix 3))	Immediate	In rubber or plastics that touch end-users' hands: 0.03 wt%（300 ppm） Other than in rubber or plastics that touch end-users' hands: 0.1 wt%（1000 ppm）	RoHS Directive, Proposition 65	Carcinogenicity, inhalation toxicity, oral toxicity	Lead pipes. lead plate, electrical wire sheathing (PVC stabilizers), solder, rubber curing agents, rubber vulcanizing agents, high-melting-point solder inside electronic components, fuses, glass, pigments, lubricants, plastic alloy materials, X-ray shielding, ferroelectric materials, plating, resin additives
		Batteries (including storage batteries)	See Table 1	See Table 1	See Table 1		See Table 1
		Packaging materials	See Table 2	See Table 2	See Table 2		See Table 2
10	**Mercury and its compounds**	All uses (excluding batteries, packaging materials and exempted uses (Appendix 3))	Immediate	0.1 wt%（1000 ppm）	RoHS Directive	Carcinogenicity, inhalation toxicity, oral toxicity	Fluorescent tubes, cold-cathode tubes, ink pigments, corrosion inhibitors, fluorescent materials, electrical contact materials
		Batteries (including storage batteries)	See Table 1	See Table 1.	See Table 1		See Table 1
		Packaging materials	See Table 2	See Table 2	See Table 2		See Table 2
11	**Azo dye, pigment** *The surveillance object shall be only mechanical parts, excluding toner or ink of the printer, printed papers and CD-R.	use in direct contact with skin (casing of watch, strap and case of headphone and earphone)	Immediate	The content of specified amines formed by decomposition of azo dye and pigment in the material should not exceed 0.003 wt% (30 ppm)*1	REACH Reg. German Dairy Good Regulation	carcinogen, mutagen, inhalation toxicity, oral toxicity	dye, pigment (The toner or ink of the printer, printed papers and CD-R are excluded from the surveillance objects.)
				*(*1) Definition of specified amine is based on Appendix 2.*			
12	**Bis(tributyltin)oxide (TBTO)**	All uses	imme-diate	Intentional addition	Law concern. Ex. & Regul. Manuf. Chem. Subs.	regenerative toxicity	ink, antiseptic, fungicide, pigment
13	**Tri-substituted Organostannic Compounds**	All uses	imme-diate	0.1% equivalent tin weight per supplied component	REACH Reg.	regenerative toxicity	stabilizer, antioxidant/anti-aging agent, bactericide, fungicide, decontamination agent
14	**Polychlorinated naphthalene** (chlorine number of 3 or more)	All uses	imme-diate	Intentional addition	POPs Convention	Inhalation toxicity, oral toxicity	antiseptic, insecticide lubricating oil, paint

Appendix 1

15	**Short chain chloribated paraffin** (carbon 10-13)	All uses	imme-diate	0.1wt% (1000 ppm)	POPs Convention	Inhalation toxicity, oral toxicity	flame retardant, plasticizer, leather greasing agent
16	**Radioactive substance**	All uses	imme-diate	Intentional addition	Law of Regulation of Nuclear Reactor	destruction of gene by radiation	optical glass (thorium)
27	**PFOS and its salts**	All uses (excluding exempted uses (Appendix 3))	imme-diate	Per supplied component less than 0.1 wt%（1000 ppm）	Convention on POPs	Oral toxicity	Surfactants, detergents, lubricants
28	**2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol**	As stipulated for "products using class I specific chemical substances" in "Japanese Chemical Substances Control Law" (plastic molding, decorative board, adhesives (except those of plants and animals), putties and fillers for sealing or obstruction, printing inks and paints, deodorant, wax, ink ribbons, photo paper)	imme-diate	Intentional addition	Law Concerning the Examination and Regulation of Manufacture, etc., of Chemical Substances	Oral toxicity	Ultraviolet absorbing agent
29	**Dimethylfumarate(DMFu)**	All uses	imme-diate	0.00001wt% (0.1 ppm)	REACH Reg.	Dermal toxicity	Antifungal agent (wood, natural textiles, leather, desiccant bag)
30	**Dibutyltin (DBT) compounds, Dioctyltin (DOT) compound**	DBT: All uses (excluding exempted uses (Appendix 3)) DOT: Uses involving direct contact with the skin	imme-diate	0.1% equivalent tin weight per supplied component	REACH Reg.	DBT: reproductive toxicity DOT: dermal toxicity	PVC stabilizer, curing catalyst for silicone resin and urethane resin
31	**Hexabromocyclododecane (HBCD)**	All uses	1 Oct, 2015	Intentional addition	POPs Convention	Persistent, bioaccumulative	Flame retardants such as expanded polystyrene, curing accelerator of adhesive, coating of textile
32	**PFOA and individual salts and esters of PFOA**	All uses	1 Oct, 2015	Per supplied component 0.1 wt%（1000 ppm）	Norway domestic law	Oral toxicity	Surfactants, detergents, lubricants
33	**Polycyclic aromatic hydrocarbons (PAHs)**	In rubber or plastics that touch end-users' hands	1 Oct, 2015	0.0001wt% (1 ppm)	REACH Reg.	Carcinogenic	Rubber additive, carbon black impurities
34	**Specific phthalates (DEHP, DBP, BBP, DIBP)**	All uses	1 Jul, 2018	0.1% (1000ppm) for each phthalates (DEHP, DBP, BBP, DIBP)	RoHS Directive	Reproductive toxicity	PVC plasticizer resin additive, dye, pigment, adhesive, lubricant

Appendix 1

[Substances Groups for Reduction]

Confirm the present conditions of components containing these chemical substances, and try to reduce the content of these substances.

Sub-stance group No.	Name of chemical substances group	Prohibited use	Delivery banned date	Threshold	Related legal restriction	Effect on human body, ecosystem and global environment	General use
17	**Antimony and its compounds**	-	-	Intentional addition	Law of Safety of Labor	oral toxicity	semiconductor, plating, alloy, flame retardant, solder, pigment, resin additive, catalyst, stabilizer
18	**Arsenic and its compounds**	-	-	Intentional addition	REACH Reg.	carcinogen, oral toxicity	high purity semiconductor, low purity alloy additive (metallic arsenic), antiseptic of wood, antiseptic of leather, dye, pigment, glass defoaming agent, fire retardant, copper foil surface treatment agent
19	**Beryllium and its compounds**	-	-	Intentional addition	-	carcinogen, oral toxicity	alloy base, ceramic, catalyst, spring material, solder
20	**Nickel and its compounds** * Except alloy (stainless steel etc.) * The surveillance objects shall be only mechanical components, excluding the nickel used in the final products, such as batteries, electronic components, PWB		-	Intentional addition	REACH Reg.	carcinogen, oral toxicity	catalyst, mordant, coloring agent, plating, pigment, resin plasticizer electrode (Alloy and the nickel of batteries, electronic components and PWB are excluded from the surveillance objects.)
21	**Selenium and its compounds**	-	-	Intentional addition	-	oral toxicity	semiconductor, pigment, catalyst, resin plasticizer electrode, conductor printing paste material, magnetic thin film material
22	**Brominated flame retardant** (except PBB, PBDE)	-	-	Intentional addition	-	generate dioxin upon combustion	flame retardant, package sealant
23	**Poly vinyl chloride (PVC)**	-	-	Intentional addition	-	generate dioxin upon combustion	resin, wire material, insulating material
24	**Phthalates (except DEHP, DBP, BBP and DIBP)**	-	-	Intentional addition	-	Reproductive toxicity	PVC plasticizer resin additive, dye, pigment, adhesive, lubricant
25	**Creosote** * Only for wooden article.		-	Intentional addition	REACH Reg.	inhalation toxicity	preservative of wood
26	**Formaldehyde** * Only for wooded article		-	Intentional addition	German Chemicals Prohibition Ordinance, Denmark formalin regulation	inhalation toxicity	adhesive of polywood and wall paper, resin

Appendix 1

Table 1 Prohibited Substances Groups in Batteries

It is prohibited to supply batteries with content levels that exceed the threshold levels for prohibited uses, or to supply products that include such batteries, except where those uses are exempted.

Sub-stance group No.	Name of chemical substances group	Prohibited use	Delivery banned date	Threshold (*Note)	Related legal restriction	General use
7	Cadmium	Alkaline manganese batteries, nickel cadmium batteries, alkaline secondary batteries, nickel-hydrogen batteries (excluding button cells)	imme-diate	0.001 wt% (10 ppm)	EU battery directives, Argentine battery regulations, Korean battery regulations, Brazilian battery	(Examples of prohibited uses) Batteries, storage batteries, battery backs or storage battery packs, regardless of whether they are portable and regardless of whether they are incorporated into appliances (Exempted uses) Portable batteries or storage batteries intended for designated uses (cordless power tools, medical equipment and emergency warning devices, including emergency lighting
		Batteries other than the above	imme-diate	0.002 wt% (20 ppm)		
9	Lead	Alkaline manganese batteries	imme-diate	0.1 wt% (1000 ppm)	Argentine battery regulations, Korean battery regulations, Brazilian battery regulations	(Examples of prohibited uses) Batteries, storage batteries, battery backs or storage battery packs, regardless of whether they are portable and regardless of whether they are incorporated into appliances (Exempted uses) None
		Primary batteries other than alkaline or manganese batteries	imme-diate	0.2 wt% (2000 ppm)		
		Alkaline secondary batteries, nickel-hydrogen batteries	imme-diate	0.4 wt% (4000 ppm)		
10	Mercury	Alkaline manganese batteries, nickel cadmium batteries, alkaline secondary batteries, nickel-hydrogen batteries (excluding button cells)	imme-diate	0.0001 wt% (1 ppm)	EU battery directives, Argentine battery regulations, Korean battery regulations, Brazilian battery regulations, U.S. battery regulations, Paraguay battery regulations	(Examples of prohibited uses) Batteries, storage batteries, battery backs or storage battery packs, regardless of whether they are incorporated into appliances (Exempted uses) None
		Button cells	imme-diate	2 wt% (20000 ppm)		
		Other batteries	imme-diate	0.0005 wt% (5 ppm)		
		All batteries	imme-diate	25 mg		

(*Note) Numeric values are set as the threshold levels (threshold value: rate of inclusion) for battery uses.
Note that the approach for inclusion rates differs from other uses.

* Battery inclusion rates are calculated taking the weight of the included substance as a proportion of the total battery weight.

$$\text{Battery inclusion rate} = \frac{\text{Weight of the chemical substance included in the battery}}{\text{Battery weight}}$$

Appendix 1

Table 2 Prohibited Substances Groups in Packaging Materials

It is prohibited to supply packaging materials with content that exceeds the threshold levels for prohibited uses, or to supply products that include such packaging materials, except where those uses are exempted.

Sub-stance group No.	Name of chemical substances group	Prohibited use	Delivery prohibited date	Threshold (*Note)	Related legal restriction	General uses including prohibited uses
7, 8, 9, 10	Cadmium, hexavalent chromium, lead, mercury	Packaging materials	immediate	Total weight of 4 substances as a proportion of the homogeneous material: 0.01 wt%（100 ppm）	EU packaging materials directives, US state regulations covering heavy metals in packaging materials	(Examples of prohibited uses) Casio deliverables (packaging materials used by Casio), packaging for Casio deliverables and component materials used as supplementary materials during packaging (Exempted uses) Packaging materials that have been recovered or recycled under the management of the supplier

(*Note) Previously, the threshold has been calculated using the entire amount of packaging materials as the denominator, but as of edition 7, the inclusion rate for each homogeneous material is also applied to packaging material uses. The inclusion rate for packaging materials is taken as the weight of the 4 substances (total value) as a proportion of the weight of each of the homogeneous material of the packaging material (polyethylene sheet portion, ink, adhesive, etc.).

$$\text{Inclusion rate for packaging materials} = \frac{\text{Weight of the 4 substances (total value) included in homogeneous material of the packaging material}}{\text{Weight of homogeneous material of the packaging material}}$$

Appendix 2

【List of Chemical Substances for CASIO Green Components（Detailed）】

List of Chemical Substances for CASIO Green Components（Detailed）
This list contains only important substances belong to "List of Chemical Substances for CASIO Green Components（Detailed）"(Page8-9), and not all of them. If Component contains corresponded substance which is out of this list, it must be summed up.
Names and CAS Numbers of Chemical Substances
Please confirm the CAS number as there are multiple names for chemical substances. CAS numbers are used by the American Chemical Society's Chemical Abstracts Service (CAS) to distinguish chemical substances. While the names for chemical substances may vary, the same chemical substance can be determined if the CAS numbers are consistent.

【Prohibited Substances】

SUB-STANCE GROUP No.		Chemical Substance Name（Detailed）	CAS No	conversion coefficient
1		**PBBs (polybrominated biphenyls)**		
		DiBB	13029-09-9	1.000
		TeBB	40088-45-7	1.000
		HxBB	59536-65-1	1.000
		OBB	27858-07-7	1.000
		DeBB	13654-09-6	1.000
2		**PBDEs (polybrominated diphenyl ethers)**		
		DiBDE	2050-47-7	1.000
		TrBDE	49690-94-0	1.000
		TeBDE	40088-47-9	1.000
		PeBDE	32534-81-9	1.000
		HxBDE	36483-60-0	1.000
		OBDE	32536-52-0	1.000
		NBDE	63936-56-1	1.000
		DeBDE	1163-19-5	1.000
3		**PCBs/PCTs**		
		Polychlorinated biphenyls	1336-36-3	1.000
		Polychlorinated terphenyls	61788-33-8	1.000
		Other PCBs/PCTs	-	1.000
4		**Asbestos**		
		Aktinolith	77536-66-4	1.000
		Amosit	12172-73-5	1.000
		Anthophyllit	77536-67-5	1.000
		Chrysotil	12001-29-5	1.000
		Krokydolith	12001-28-4	1.000
		Tremolite	77536-68-6	1.000
		Other asbestos	-	-
5		**Ozone depleting substances**		
	class I	Trichlorofluoromethane	75-69-4	1.000
		Dichlorodifluoromethane (CFC 12)	75-71-8	1.000
		Chlorotrifluoromethane (CFC 13)	75-72-9	1.000
		Pentachlorofluoroethane (CFC 111)	354-56-3	1.000
		Tetrachlorodifluoroethane (CFC 112)	76-12-0	1.000
		Trichlorotrifluoroethane (CFC 113)	354-58-5	1.000
		1,1,2 Trichloro-1,2,2 trifluoroethane	76-13-1	1.000
		Dichlorotetrafluoroethane (CFC 114)	76-14-2	1.000
		Monochloropentafluoroethane (CFC 115)	76-15-3	1.000
		Heptachlorofluoropropane (CFC 211)	422-78-6 135401-87-5	1.000
		Hexachlorodifluoropropane (CFC 212)	3182-26-1	1.000
		Pentachlorotrifluoropropane (CFC 213)	2354-06-5 134237-31-3	1.000
		Tetrachlorotetrafluoropropane (CFC 214)	29255-31-0	1.000
		1,1,1,3-Tetrachlorotetrafluoropropane	2268-46-4	1.000
		Trichloropentafluoropropane (CFC 215)	1599-41-3	1.000
		1,1,1-Trichloropentafluoropropane	4259-43-2	1.000
		1,2,3-Trichloropentafluoropropane	76-17-5	1.000
		Dichlorohexafluoropropane (CFC 216)	661-97-2	1.000
		Monochloroheptafluoropropane (CFC 217)	422-86-6	1.000
		Bromochlorodifluoromethane (Halon 1211)	353-59-3	1.000
		Bromotrifluoromethane (Halon 1301)	75-63-8	1.000
		Dibromotetrafluoroethane (Halon 2402)	124-73-2	1.000
		Carbon Tetrachloride (Tetrachloromethane)	56-23-5	1.000
		1,1,1,-Trichloroethane (methyl chloroform) and its isomers except 1,1,2-trichloroethane	74-83-9	1.000
		Bromomethane (Methyl Bromide)	74-83-9	1.000
		Dibromofluoromethane	1868-53-7	1.000
		Bromodifluoromethane	1511-62-2	1.000

Appendix 2

class I	Bromofluoromethane	373-52-4	1.000
	Tetrabromofluoroethane	306-80-9	1.000
	Tribromodifluoroethane	-	1.000
	Dibromotrifluoroethane	354-04-1	1.000
	Bromotetrafluoroethane	124-72-1	1.000
	Tribromofluoroethane	-	1.000
	Dibromodifluoroethane	75-82-1	1.000
	Bromotrifluoroethane	421-06-7	1.000
	Dibromofluoroethane	358-97-4	1.000
	Bromodifluoroethane	420-47-3	1.000
	Bromofluoroethane	762-49-2	1.000
	Hexabromofluoropropane	-	1.000
	Pentabromodifluoropropane	-	1.000
	Tetrabromotrifluoropropane	-	1.000
	Tribromotetrafluoropropane	-	1.000
	Dibromopentafluoropropane	431-78-7	1.000
	Bromohexafluoropropane	2252-78-0	1.000
	Pentabromofluoropropane	-	1.000
	Tetrabromodifluoropropane	-	1.000
	Tribromotrifluoropropane	-	1.000
	Dibromotetrafluoropropane	-	1.000
	Bromopentafluoropropane	460-88-8	1.000
	Tetrabromofluoropropane	-	1.000
	Tribromodifluoropropane	70192-80-2	1.000
	Dibromotrifluoropropane	431-21-0	1.000
	Bromotetrafluoropropane	679-84-5	1.000
	Tribromofluoropropane	75372-14-4	1.000
	Dibromodifluoropropane	460-25-3	1.000
	Bromotrifluoropropane	421-46-5	1.000
	Dibromofluoropropane	51584-26-0	1.000
	Bromodifluoropropane	-	1.000
	Bromofluoropropane	1871-72-3	1.000
	Bromochloromethane	74-97-5	1.000
class II	Dichlorofluoromethane (HCFC 21)	75-43-4	1.000
	Chlorodifluoromethane (HCFC 22)	75-45-6	1.000
	Chlorofluoromethane (HCFC 31)	593-70-4	1.000
	Tetrachlorofluoroethane (HCFC 121)	134237-32-4	1.000
	1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a)	354-11-0	1.000
	1,1,2,2-tetracloro-1-fluoroethane	354-14-3	1.000
	Trichlorodifluoroethane (HCFC 122)	41834-16-6	1.000
	1,2,2-trichloro-1,1-difluoroethane	354-21-2	1.000
	Dichlorotrifluoroethane(HCFC 123)	34077-87-7	1.000
	Dichloro-1,1,2-trifluoroethane	90454-18-5	1.000
	2,2-dichloro-1,1,1-trifluroethane	306-83-2	1.000
	1,2-dichloro-1,1,2-trifluroethane (HCFC 123a)	354-23-4	1.000
	1,1-dichloro-1,2,2-trifluroethane (HCFC 123b)	812-04-4	1.000
	2,2-dichloro-1,1,2-trifluroethane (HCFC 123b)	812-04-4	1.000
	Chlorotetrafluoroethane (HCFC 124)	63938-10-3	1.000
	2-chloro-1,1,1,2-tetrafluoroethane	2837-89-0	1.000
	1-chloro-1,1,2,2-tetrafluoroethane (HCFC 124a)	354-25-6	1.000
	Trichlorofluoroethane (HCFC 131)	27154-33-2; (134237-34-6)	1.000
	1-Fluoro-1,2,2-trichloroethane	359-28-4	1.000
	1,1,1-trichloro-2-fluoroethane (HCFC 131b)	811-95-0	1.000
	1-Chloro-1-fluoroethane (HCFC-151)	1615-75-4	1.000
	Dichlorodifluoroethane (HCFC 132)	25915-78-0	1.000
	1,2-dichloro-1,1-difluoroethane (HCFC 132b)	1649-08-7	1.000
	1,1 -dichloro-1,2-difluoroethane (HCFC 132c)	1842-05-3	1.000
	1,1 -dichloro-2,2-difluoroethane	471-43-2	1.000
	1,2-dichloro-1,2-difluoroethane	431-06-1	1.000
	Chlorotrifluoroethane (HCFC 133)	1330-45-6	1.000
	1-chloro-1,2,2-trifluoroethane	1330-45-6	1.000
	2-chloro-1,1,1-trifluoroethane (HCFC 133a)	75-88-7	1.000
	Dichlorofluoroethane(HCFC 141)	1717-00-6; (25167-88-8)	1.000
	1,1-dichloro-1-fluoroethane (HCFC 141b)	1717-00-6	1.000
	1,2-dichloro-1-fluoroethane	430-57-9	1.000
	Chlorodifluoroethane (HCFC 142)	25497-29-4	1.000
	1-chloro-1,1-difluoroethane (HCFC 142b)	75-68-3	1.000
	1-chloro-1,2-difluoroethane (HCFC142a)	25497-29-4	1.000
	Hexachlorofluoropropane (HCFC 221)	134237-35-7	1.000
	Pentachlorodifluoropropane (HCFC 222)	134237-36-8	1.000
	Tetrachlorotrifluropropane (HCFC 223)	134237-37-9	1.000
	Trichlorotetrafluoropropane (HCFC 224)	134237-38-0	1.000

	class II	Dichloropentafluoropropane, (Ethyne, fluoro-) (HCFC 225)	127564-92-5;	1.000
		2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC 225aa)	128903-21-9	1.000
		2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC 225ba)	422-48-0	1.000
		1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225bb)	422-44-6	1.000
		3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca)	422-56-0	1.000
		1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb)	507-55-1	1.000
		1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC 225cc)	13474-88-9	1.000
		1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC 225da)	431-86-7	1.000
		1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225ea)	136013-79-1	1.000
		1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC 225eb)	111512-56-2	1.000
		Chlorohexafluoropropane (HCFC 226)	134308-72-8	1.000
		Pentachlorofluoropropane (HCFC 231)	134190-48-0	1.000
		Tetrachlorodifluoropropane (HCFC 232)	134237-39-1	1.000
		Trichlorotrifluoropropane (HCFC 233)	134237-40-4	1.000
		1,1,1-Trichloro-3,3,3-trifluoropropane	7125-83-9	1.000
		Dichlorotetrafluoropropane (HCFC 234)	127564-83-4	1.000
		Chloropentafluoropropane (HCFC 235)	134237-41-5	1.000
		1-Chloro-1,1,3,3,3-pentafluoropropane	460-92-4	1.000
		Tetrachlorofluoropropane (HCFC 241)	134190-49-1	1.000
		Trichlorodifluoropropane (HCFC 242)	134237-42-6	1.000
		Dichlorotrifluoropropane (HCFC 243)	134237-43-7	1.000
		1,1-dichloro-1,2,2-trifluoropropane	7125-99-7	1.000
		2,3-dichloro-1,1,1 -trifluoropropane	338-75-0	1.000
		3,3-Dichloro-1,1,1-trifluoropropane	460-69-5	1.000
		Chlorotetrafluoropropane (HCFC 244)	134190-50-4	1.000
		3-chloro-1,1,2,2-tetrafluoropropane	679-85-6	1.000
		Trichlorofluoropropane (HCFC 251)	134190-51-5	1.000
		1,1,3-trichloro-1-fluoropropane	818-99-5	1.000
		Dichlorodifluoropropane (HCFC 252)	134190-52-6	1.000
		Chlorotrifluoropropane (HCFC 253)	134237-44-8	1.000
		3-chloro-1,1,1-trifluoropropane (HCFC 253fb)	460-35-5	1.000
		Dichlorofluoropropane (HCFC 261)	134237-45-9	1.000
		1,1-dichloro-1-fluoropropane	7799-56-6	1.000
		Chlorodifluoropropane (HCFC 262)	134190-53-7	1.000
		2-chloro-1,3-difluoropropane	102738-79-4	1.000
		Chlorofluoropropane (HCFC 271)	134190-54-8	1.000
		2-chloro-2-fluoropropane	420-44-0	1.000
6	**Pentachlorophenol**		**87-86-5**	
7	**Cadmium and its compounds**			
	Cadmium		7440-43-9	1.000
	Cadmium chloride		10108-64-2	0.613
	Cadmium oxide		1306-19-0	0.875
	Diethylcadmium		592-02-9	0.659
	Dimethylcadmium		506-82-1	0.789
	Cadmium bromide		7789-42-6	0.413
	Cadmium nitrate		10325-94-7	0.475
	Cadmium carbonate (1:1)		513-78-0	0.652
	Cadmium fluoride		7790-79-6	0.747
	Cadmium sulfide		1306-23-6	0.778
	Other cadmium compounds		-	-
8	**Chromium(VI) compounds**			
	Potassium chromate		7789-00-6	0.268
	Calcium chromate		13765-19-0	0.333
	Sodium chromate		7775-11-3	0.321
	Lead chromate		7758-97-6	0.161
	Dichromicacid		13530-68-2	0.477
	Ammonium dichromate		7789-09-5	0.413
	Potassium dichromate		7778-50-9	0.354
	Other chromium(VI) compounds		-	-
9	**Lead and its compounds**			
	Lead		7439-92-1	1.000
	Lead(II) oxide		1317-36-8	0.928
	Lead(II) fluoro silicate		25808-74-6	0.538
	Lead acetate		301-04-2	0.637
	Lead(II) nitrate		10099-74-8	0.626
	Lead hydroxide		39345-91-0	0.924
	Lead acetate trihydrate		6080-56-4	0.99
	Lead carbonate		598-63-0	0.775
	Tetraethyl lead		78-00-2	0.64
	Tetramethyl lead		75-74-1	0.775
	Lead chloride		7758-95-4	0.745
	Lead dioxide		1309-60-0	0.866
	Lead(II) fluoride		7783-46-2	0.845
	Lead iodide		10101-63-0	0.449

	Llead oxide red	1314-41-6	0.907
	Lead sulfide	1314-87-0	0.866
	Lead(II) sulfate(1:1)	7446-14-2	0.683
	Lead(II) phosphate(3:2)	7446-27-7	0.766
	Lead hydroxidcarbonate	1344-36-1	0.801
	Lead chromate	7758-97-6	0.641
	Other lead compounds	-	-
10	**Mercury and its compounds**		
	Mercury	7439-97-6	1.000
	Mercuric chloride	7487-94-7	0.739
	Phenylmercuric chloride	100-56-1	0.641
	Mercuric asetate	1600-27-7	0.629
	Mercuric oxide	21908-53-2	0.926
	Diethyl mercury	627-44-1	0.775
	Mercury(II) bromide	7789-47-1	0.557
	Mercury(II) iodide	7774-29-0	0.441
	Mercuric sulfate	7783-35-9	0.676
	Other mercury compounds	-	-
11	**Azo compounds (which may release the aromatic amines listed below, by reductive cleavage)**		
	4-Aminoazobenzene	60-09-3	1.000
	o-anisidine	90-04-0	1.000
	2-naphthylamine	91-59-8	1.000
	3,3'-dichlorobenzidine	91-94-1	1.000
	biphenyl-4-ylamine	92-67-1	1.000
	Benzidine	92-87-5	1.000
	o-toluidine	95-53-4	1.000
	4-chloro-o-toluidine	95-69-2	1.000
	2,4-toluenediamine	95-80-7	1.000
	o-aminoazotoluene	97-56-3	1.000
	5-nitro-o-toluidine	99-55-8	1.000
	3,3'-dichloro-4,4'-diaminodiphenylmethane	101-14-4	1.000
	4,4'-methylenedianiline	101-77-9	1.000
	4,4'-diaminodiphenylether	101-80-4	1.000
	p-chloroaniline	106-47-8	1.000
	3,3'-dimethoxybenzidine	119-90-4	1.000
	3,3'-dimethylbenzidine	119-93-7	1.000
	2-methoxy-5-methylaniline	120-71-8	1.000
	2,4,5-trimethylaniline	137-17-7	1.000
	4,4'-thiodianiline	139-65-1	1.000
	4-methoxy-m-phenylenediamine	615-05-4	1.000
	4,4'-methylenedi-o-toluidine	838-88-0	1.000
12	**Bis(tri-n-butyltin) oxide**	56-35-9	0.398241817
13	**Tri-substituted Organostannic Compounds**		
	Triphenyltin-N, N-dimethyldithiocarbamate	1803-12-9	0.252
	Triphenyltin fluoride	379-52-2	0.322
	Triphenyltin acetate	900-95-8	0.29
	Triphenyltin chloride	639-58-7	0.308
	Triphenyltin hydroxide	76-87-9	0.323
	Triphenyltin fattyacid((9-11)salt)	18380-71-7	0.235
	Triphenyltin fattyacid((9-11)salt)	18380-72-8	0.235
	Triphenyltin fattyacid((9-11)salt)	47672-31-1	0.229
	Triphenyltin fattyacid((9-11)salt)	94850-90-5	0.223
	Triphenyltin chloroacetate	7094-94-2	0.268
	Tributyltin methacrylate	2155-70-6	0.316
	Bis(tributyltin) fumalate	6454-35-9	0.342
	Tributyltin fluoride	1983-10-4	0.384
	Bis(tributyltin)2,3-dibromosuccinate	31732-71-5	0.278
	Tributyltin acetate	56-36-0	0.34
	Tributyltin laurate	3090-36-6	0.243
	Bis(tributyltin) phthalate	4782-29-0	0.319
	Coplymer of alkyl (c=8) acrylate, methyl methacrylate and tributyltin methacrylate	67772-01-4	0.18
	Tributyltin sulfamate	6517-25-5	0.307
	Bis(tributyltin) maleate	14275-57-1	0.341
	Tributyltin chloride (A)	1461-22-9	0.365
	Tributyltin chloride (B)	7342-38-3	0.365
	Tributyltin cyclopentane carbonate = mixture	85409-17-2	0.237
	Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isoplopyl-1,4a-dimethyl-1-phenanthrencarboxylatem	26239-64-5	0.201
	Other tri-substituted organostannic compounds	-	-
14	**Polychlorinated Naphthalenes (with 3 or more than 3 chlorine atoms)**		
	Polychlorinated Naphthalenes (with 3 or more than 3 chlorine atoms)	70776-03-3	1.000
15	**Chlorinated Paraffins**		
	Chlorinated Paraffins (C10-13)	85535-84-8	1.000

Appendix 2

16	**Radioactive substances**		
	Uranium	-	1.000
	Plutonium	-	1.000
	Radon	-	1.000
	Americium	-	1.000
	Thorium	-	1.000
	Other radioactive substances	-	1.000
27	**PFOS and its salts**		
	PFOS and its salts	-	1.000
28	**2-(2'-Hydroxy-3',5'-di-tert-butylphenyl)benzotriazole**	3846-71-7	1.000
29	**Dimethylfumarate(DMFu)**	624-49-7	1.000
30	**Dibutyltin (DBT) compounds, Dioctyltin (DOT) compound**		
	Dibutyltin oxide	818-08-6	0.477
	Dibutyltin diacetate	1067-33-0	0.338
	Dibutyltin dilaurate	77-58-7	0.188
	Dibutyltin maleate	78-04-6	0.342
	Dioctyl Tin Oxide	870-08-6	0.329
	Dioctyltin dilaurate	3648-18-8	0.16
	Other Dibutyltin compounds or Dioctyltin compounds	-	1.000
31	**Hexabromocyclododecane (HBCD)**		
	Hexabromocyclododecane	25637-99-4	1.000
	1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6	1.000
	rel-(1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6	1.000
	rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5	1.000
	α-Hexabromocyclododecane	134237-50-6	1.000
	β-Hexabromocyclododecane	134237-51-7	1.000
	γ-Hexabromocyclododecane	134237-52-8	1.000
	(1R,2R,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7	1.000
	(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8	1.000
	(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9	1.000
	(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2	1.000
	(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5	1.000
	(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6	1.000
	(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7	1.000
32	**PFOA and individual salts and esters of PFOA**		
	Perfluorooctanoic acid (PFOA)	335-67-1	1.000
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	1.000
	Sodium salt of Perfluorooctanoic acid	335-95-5	1.000
	Potassium salt of Perfluorooctanoic acid	2395-00-8	1.000
	Silver(1+) salt of Perfluorooctanoic acid	335-93-3	1.000
	Perfluorooctanoyl fluoride	335-66-0	1.000
	Methyl perfluorooctanoate	376-27-2	1.000
	Ethyl perfluorooctanoate	3108-24-5	1.000
33	**Polycyclic aromatic hydrocarbons (PAHs)**		
	Benzo[a]pyrene (BaP)	50-32-8	1.000
	Benzo[e]pyrene (BeP)	192-97-2	1.000
	Benzo[a]anthracene (BaA)	56-55-3	1.000
	Chrycene (CHR)	218-01-9	1.000
	Benzo[b]fluoranthene (BbFA)	205-99-2	1.000
	Benzo[j]fluoranthene (BjFA)	205-82-3	1.000
	Benzo[k]fluoranthene (BkFA)	207-08-9	1.000
	Dibenzo[a,h]anthracene (DBAhA)	53-70-3	1.000
34	**Specific phthalates (DEHP, DBP, BBP, DIBP)**		
	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	1.000
	Dibutylphthalate (DBP)	84-74-2	1.000
	Butyl benzyl phthalate (BBP)	85-68-7	1.000
	Diisobutyl phthalate (DIBP)	84-69-5	1.000

Appendix 2

【Substances for Reduction】

SUB-STANCE GROUP No.	Chemical Substance Name（Detailed）	CAS No	conversion coefficient
17	**Antimony and its compounds**		
	Antimony	7440-36-0	1.000
	Antimony trichloride	10025-91-9	0.534
	Antimony trioxide	1309-64-4	0.835
	Antimony pentoxide	1314-60-9	0.753
	Sodium antimonate	15432-85-6	0.632
	Other antimony compounds	-	-
18	**Arsenic and its compounds**		
	Arsenic	7440-38-2	1.000
	Arsine	7784-42-1	0.961
	Pentachloroarsorane	22441-45-8	0.297
	Diarsenic pentoxide	1303-28-2	0.652
	Pentafluoro arsorane	7784-36-3	0.441
	Arsenic trichloride	7784-34-1	0.413
	Arsenic trioxide	1327-53-3	0.758
	Arsenic trifluoride	7784-35-2	0.568
	Arsenic sulphide	1303-33-9	0.609
	Dimethyl arsinic acid	75-60-5	0.543
	Arsenicacid	7778-39-4	0.528
	Sodium arsenate dibasic	7778-43-0	0.403
	Benzene arsonic acid	98-05-5	0.371
	Ammonium methane arson acid	2321-53-1	0.477
	Gallim arsenide	1303-00-0	0.518
	Other arsenic compounds	-	-
19	**Beryllium and its compounds**		
	Beryllium	7440-41-7	1.000
	Beryllium chloride	7787-47-5	0.113
	Beryllium silicate	15191-85-2	0.164
	Beryllium oxide	1304-56-9	0.360
	Beryllium nitrate	13597-99-4	0.068
	Beryllium chloride	7787-49-7	0.192
	Beryllium sulfate tetrahydrate	7787-56-6	0.051
	Beryllium sulphate	13510-49-1	0.086
	Other beryllium compounds	-	-
20	**Nickel compounds**		
	Nickel	7440-02-0	1.000
	Nickel acetate tetrahydrate	6018-89-9	0.332
	Nickel(II) oxide	1313-99-1	0.786
	Nickel nitrate hexahydrate	13478-00-7	0.202
	Nickel(II) hydroxide	12054-48-7	0.633
	Nickel carbonate	3333-67-3	0.494
	Nickel carbonyl	13463-39-3	0.344
	Nickel dimethyldithiocarbamate	15521-65-0	0.196
	Nickel subsulfide	12035-72-2	0.244
	Nickel(II) sulphate	7786-81-4	0.379
	Other nickel compounds	-	-
21	**Selenium and its compounds**		
	Selenium	7782-49-2	1.000
	Selenous acid	7783-00-8	0.612
	Other selenium compounds	-	-
22	**Brominated flame retardant (except PBB, PBDE)**		
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-	1.000
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-	1.000
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds（excluding brominated diphenyl ether and brominated biphenyls）]	-	1.000
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds（excluding brominated diphenyl ether and brominated biphenyls）in combination with antimony compounds]	-	1.000
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-	1.000
	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-	1.000
	Poly(2,6-dibromo-phenylene oxide)	69882-11-7	1.000
	Tetra-decabromo-diphenoxy-benzene	58965-66-5	1.000
	1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1	1.000

Appendix 2

	3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7	1.000
	TBBA, unspecified	30496-13-0	1.000
	TBBA-epichlorhydrin oligomer	40039-93-8	1.000
	TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5	1.000
	TBBA carbonate oligomer	28906-13-0	1.000
	TBBA carbonate oligomer, phenoxy end capped	94334-64-2	1.000
	TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3	1.000
	TBBA-bisphenol A-phosgene polymer	32844-27-2	1.000
	Brominated epoxy resin end-capped with tribromophenol	139638-58-7	1.000
	Brominated epoxy resin end-capped with tribromophenol	135229-48-0	1.000
	TBBA-(2,3-dibromo-propyl-ether)	21850-44-2	1.000
	TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2	1.000
	TBBA-bis-(allyl-ether)	25327-89-3	1.000
	TBBA-dimethyl-ether	37853-61-5	1.000
	Tetrabromo-bisphenol S	39635-79-5	1.000
	TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1	1.000
	2,4-Dibromo-phenol	615-58-7	1.000
	2,4,6-tribromo-phenol	118-79-6	1.000
	Pentabromo-phenol	608-71-9	1.000
	2,4,6-Tribromo-phenyl-alltl-ether	3278-89-5	1.000
	Tribromo-phenyl-allyl-ether, unspecified	26762-91-4	1.000
	Hexabromo-cyclo-dodecane (HBCD), unspecified	3194-55-6	1.000
	Tetrabromo-chyclo-octane	31454-48-5	1.000
	1,2-Dibromo-4-(1,2 dibromo-methyl)-cyclo-hexane	3322-93-8	1.000
	TBPA Na salt	25357-79-3	1.000
	Tetrabromo phthalic anhydride	632-79-1	1.000
	Bis(methyl)tetrabromo-phtalate	55481-60-2	1.000
	Bis(2-ethlhexyl)tetrabromo-phtalate	26040-51-7	1.000
	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2	1.000
	TBPA, glycol-and propylene-oxide esters	75790-69-1	1.000
	N,N'-Ethylene –bis-(tetrabromo-phthalimide)	32588-76-4	1.000
	Ethylene-bis85,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0	1.000
	2,3-Dibromo-2-butene-1,4-diol	3234-02-4	1.000
	Dibromo-neopentyl-glycol	3296-90-0	1.000
	Dibromo-propanol	96-13-9	1.000
	Tribromo-neopentyl-alcohol	36483-57-5	1.000
	Poly tribromo-styrene	57137-10-7	1.000
	Tribromo-styrene	61368-34-1	1.000
	Dibromo-styrene grafted PP	171091-06-8	1.000
	Poly-dibromo-styrene	31780-26-4	1.000
	Bromo-/Chloro-paraffins	68955-41-9	1.000
	Bromo-/Chloro-alpha-olefin	82600-56-4	1.000
	Vinylbromide	593-60-2	1.000
	Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9	1.000
	Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3	1.000
	Tris(tribromo-neopentyl) phosphate	19186-97-1	1.000
	Chlorinated and brominated phosphate ester	125997-20-8	1.000
	Pentabromo-toluene	87-83-2	1.000
	Pentabromo-benzyl bromide	38521-51-6	1.000
	1,3-Butadiene homopolymer,brominated	68441-46-3	1.000
	Pentabromo-benzyl-acrylate, monomer	59447-55-1	1.000
	Pentabromo-benzyl-acrylate, polymer	59447-57-3	1.000
	Decabromo-diphenyl-ethane	61262-53-1	1.000
	Tribromo-bisphenyl-maleinimide	59789-51-4	1.000
	Brominated trimethylphenyl-lindane	-	1.000
	Other Brominated Flame Retardant	-	1.000
23	**Poly(vinyl chloride)**	**9002-86-2**	**1.000**
24	**Phthalates (except DEHP, DBP, BBP, DIBP)**		
	Diisononyl phthalate (DINP)	28553-12-0	1.000
	1,2-Benzenedicarboxylic acid diisodecyl ester (DIDP)	26761-40-0	1.000
	Di-n-octyl phthalate (DNOP)	117-84-0	1.000
	Other phthalates	-	1.000
25	**Creosotes**		
	Creosote	8001-58-9	1.000
	Creosote oil	61789-28-4	1.000
	Distillates(coal tar) Naphthalene oils	84650-01-4	1.000
	Creosote oil, Acenaphthalene fraction	90640-84-9	1.000
	Distillates(coal tar) upper	65996-91-0	1.000
	Anthracene oil	90640-80-5	1.000
	Tar acids, Coal, Crude	65996-85-2	1.000
	Creosote, Wood	8021-39-4	1.000
	Low temperature tar oil, alkaline	122384-78-5	1.000
26	**Formaldehyde**	**50-00-0**	**1.000**

Appendix 3

[Casio Green Components - Exempted Uses for Prohibited Substances

This section outlines the range of prohibited uses for chemical substances with control levels of "prohibited" in the "List of Chemical Substances Group" in Appendix 1.
Note that the prohibited uses may include some designated "exempted uses" that are not prohibited.
This list shows all the exempted uses stipulated by the Casio Group.

Exempted Uses (those prohibited uses where substance inclusion is permitted)

[1] EU-RoHS directive exempted applications

* Compliant with Annex III of the EU-RoHS directive (2011/65/EU) but the date of applicability is 6 months in advance.
Exempted uses that do not apply to Casio products have been omitted.

No.	Exempted Uses	dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a)	For general lighting purposes < 30 W: 5 mg	- Expires on 30 June 2011; - 3,5 mg may be used per burner after 30 June 2011 until 30 June 2012 - 2,5 mg shall be used per burner after 30 June 2012
1(b)	For general lighting purposes ≥ 30 W and < 50 W: 5 mg	- Expires on 30 June 2011; - 3,5 mg shall be used per burner after 30 June 2011
1(c)	For general lighting purposes ≥ 50 W and < 150 W: 5 mg	(No expiry date)
1(d)	For general lighting purposes ≥ 150 W: 15 mg	(No expiry date)
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	- No limitation of use until 30 June 2011; - 7 mg shall be used per burner after 30 June 2011
1(f)	For special purposes: 5 mg	(No expiry date)
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a) (1)	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 5 mg	- No limitation of use until 30 June 2011; - 4 mg shall be used per burner after 30 June 2011
2(a) (2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 5 mg	- No limitation of use until 30 June 2011; - 3 mg shall be used per burner after 30 June 2011
2(a) (3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 5 mg	- No limitation of use until 30 June 2011; - 3,5 mg shall be used per burner after 30 June 2011
2(a) (4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	- No limitation of use until 30 June 2011; - 3,5 mg shall be used per burner after 30 June 2011
2(a) (5)	Tri-band phosphor with long lifetime (≥ 25 000 h): 8 mg	- No limitation of use until 30 June 2011; - 5 mg shall be used per burner after 30 June 2011
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b) (1)	Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	- Expires on 13 October 2011
2(b) (2)	Non-linear halophosphate lamps (all diameters): 15 mg	- Expires on 13 October 2015
2(b) (3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	- No limitation of use until 30 June 2011; - 15 mg shall be used per burner after 30 June 2011
2(b) (4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	- No limitation of use until 30 June 2011; - 15 mg shall be used per burner after 30 June 2011

Appendix 3

3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	
3(a)	Short length (≤ 500 mm)	- No limitation of use until 30 June 2011; - 3.5 mg shall be used per burner after 30 June 2011
3(b)	Medium length (> 500 mm and ≤ 1 500 mm)	- No limitation of use until 30 June 2011; - 5 mg shall be used per burner after 30 June 2011
3(c)	Long length (> 1 500 mm)	- No limitation of use until 30 June 2011; - 13 mg shall be used per burner after 30 June 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	- No limitation of use until 30 June 2011; - 15 mg shall be used per burner after 30 June 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:	
4(b)-I	P ≤ 155 W	- No limitation of use until 30 June 2011; - 30 mg shall be used per burner after 30 June 2011
4(b)-II	155 W < P ≤ 405 W	- No limitation of use until 30 June 2011; - 40 mg shall be used per burner after 30 June 2011
4(b)-III	405W ＜ P	- No limitation of use until 30 June 2011; - 40 mg shall be used per burner after 30 June 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c)-I	P ≤ 155 W	- No limitation of use until 30 June 2011; - 25 mg shall be used per burner after 30 June 2011
4(c)-Ⅱ	155W ＜ P ≦ 405W	- No limitation of use until 30 June 2011; - 30 mg shall be used per burner after 30 June 2011
4(c)-Ⅲ	405W ＜ P	- No limitation of use until 30 June 2011; - 40 mg shall be used per burner after 30 June 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	- Expires on 13 October 2014
4(e)	Mercury in metal halide lamps (MH)	(No expiry date)
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	(No expiry date)
5(a)	Lead in glass of cathode ray tubes	(No expiry date)
5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	(No expiry date)
6(a)	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35 % lead by weight	(No expiry date)
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	(No expiry date)
6(c)	Copper alloy containing up to 4 % lead by weight	(No expiry date)
7(a)	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	(No expiry date)
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	(No expiry date)
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	(No expiry date)
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	(No expiry date)
7(c)-(III)	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125V AC or 250V DC	- Expires on 1 July 2012; - May be used in spare parts after expiry date
7(c)-Ⅳ	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors	(No expiry date)

Appendix 3

8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	- Expires on 1 July 2011; - May be used in spare parts after expiry date
8(b)	Cadmium and its compounds in electrical contacts	(No expiry date)
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	(No expiry date)
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	(No expiry date)
11(a)	Lead used in C-press compliant pin connector systems	- May be used in spare parts after expiry date
11(b)	Lead used in other than C-press compliant pin connector systems	- Expires on 1 July 2012; - May be used in spare parts after expiry date
12	Lead as a coating material for the thermal conduction module C-ring	- May be used in spare parts after expiry date
13(a)	Lead in white glasses used for optical applications	(No expiry date)
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	(No expiry date)
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight	- May be used in spare parts after expiry date
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	(No expiry date)
16	Lead in linear incandescent lamps with silicate coated tubes	- Expires on 1 March 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	(No expiry date)
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ($(Sr,Ba)_2MgSi_2O_7$:Pb)	- Expires on 1 July 2010
18(b)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($BaSi_2O_5$:Pb)	(No expiry date)
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	- Expires on 1 December 2010
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	- Expires on 1 December 2010
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	(No expiry date)
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	- May be used in spare parts after expiry date
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	(No expiry date)
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	(No expiry date)
26	Lead oxide in the glass envelope of black light blue lamps	- Expires on 1 December 2010
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	- Expires on 24 March 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	(No expiry date)
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	(No expiry date)
31	Lead in soldering materials in mercury free flat fluorescent lamps (which, e.g. are used for liquid crystal displays, design or industrial lighting)	(No expiry date)
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	(No expiry date)
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers	(No expiry date)
34	Lead in cermet-based trimmer potentiometer elements	(No expiry date)

Appendix 3

36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	- Expires on 1 December 2009
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	(No expiry date)
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	(No expiry date)
39	Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm 2 of light-emitting area) for use in solid state illumination or display systems	- Expires on 1 December 2013
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	- Expires on 30 June 2013

[2] REACH regulations and (EC) No.850/2004 Exempted Uses

* Compliant with Annex XVII of the REACH regulations and (EC) No.850/2004, but the date of applicability is 6 months in advance.
Exempted uses that do not apply to Casio products have been omitted.

PFOS and its salts for the following specific uses

	Wetting agents for use in controlled electroplating systems;	- Expires on 26 February 2015
	Photoresists or anti reflective coatings for photolithography processes	(No expiry date)
	Photographic coatings applied to films, papers, or printing plate	(No expiry date)
	Mist suppressants for non- decorative hard chromium (VI) plating in closed loop systems	(No expiry date)

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