Attachment －4

SANYO Group
Management Standards for Environmentally Hazardous Substances (Edition 6)

April 17, 2009

SANYO Electric Co. Ltd

Corporate Environment Center

Rev. No.	Established/ Revised Date	Affected page	Details of revision
1	2004.4.1	Established	—
2	2005.1.31	1	0. Basic Policy, Line 8: Added "Further, …observed."
			1. Definition of terms, (1)Management level, 2: Added "(However, …concerned)"
		2	・Table 1: Added column "Level 1 Acceptable Concentration" ・Table 1: Changed Acceptable Concentration (Cadmium: 50 -> 75ppm, Lead: 800 -> 1000ppm), and Entered phrase "Content prohibited (except for impurities)" to some fields of Acceptable Concentration column which have been blank. (these changes reflected in the tables on and after page 3) ・Table 1: Changed Management Levels of Short Chain Chlorinated Paraffins (Level 2 -> Level 1) and Radioactive Substances (partial uses up to Level 1 (Table 12 added)). ・Table 1: Changed Reportable Level (all fields replaced by the phrase "If the actual content is known, report the facts regardless of the threshold value") (these changes reflected in the tables on and after page 3) ・Added *9 Acceptable Concentration Calculation Definition to the footnotes of Table 1
		3	・Table 2, Level 2 : Added phrase "Cadmium …, etc." ・Table 2, Measurement Standards: Changed Standards from An Energy Dispersive X-Ray Fluorescence Spectrometer (EDX) to ICP-AES, ICP-OES, AAS, ICP-MS
		4	・Table 3, Measurement Standards: Changed Standards from An Energy Dispersive X-Ray Fluorescence Spectrometer (EDX) to ICP-AES, ICP-OES, AAS, ICP-MS
		6	・Table 8 Short Chain Chlorinated Paraffins: Changed uses from Level 2 to Level 1
		7	・Table 9 Ozone Depleting Substances: Changed uses from Level 3 to Level 1 ・Table 9 Ozone Depleting Substances: Separating HCFC into "destined for Japan, EU, and Australia" and "not destined for Japan, EU, and Australia", and setting the total abolition date ・Table 10 Vinyl Chloride Polymer: Setting the total abolition date in Level 2
		8	・Table 12 Radioactive Substances: Newly added
2	2005.3.31 Partially added	3	・Table 2, Level 2: Added the underlined phrases "(It will be totally prohibited on and after July 1, 2005 that cadmium shall be intentionally added to products)" and "Cadmium …zinc die casts, brass, etc."
		3、4	・Table 2 and 3, Measurement Standards: Added the underlined phrase "(e.g. Energy Dispersive X-Ray Fluorescence Spectrometer (EDX))" to "However, … guaranteed."
3	2005.9.28	all	・Changed uses from Level 2 to Level 1 because abolition date has come
		Table 2	・Changed Acceptable Concentration (Cadmium: 75 -> 100ppm) ・Changed abolition date in Level 2
		Table 3	・ Changed Management Levels of "Lead used for stabilizers and additives for electroless gold or nickel plating" (Level 3 -> Level 2)
		All	・RoHS exemption: Newly added
		Table 8	・Short Chain Chlorinated Paraffins: Changed uses from Level 3 to Level 1
		Table 13	・Asbestos: Newly added
		all	・Abolition date of products applied to J-Moss regulations: Newly added
4	2006.9.15	Table1	・Erased copper, gold , Palladium, Silver and Magnesium
		Table 2	・Level 1 acceptable concentration: Added the underlined phrases "Products other than scope of RoHS directive :Less than 75 ppm in plastic, paint and ink, etc."
		all	・Changed uses from Level 2 to Level 1 because abolition date has come ・RoHS exemption: Newly added
		Table6 and7	・Changed "Measurement Standards" from FTIR to GC-MS.
		Table 9	・HCFC:setting the total abolition date
		Table 13	・Asbestos:setting the total abolition date
5	2008.3.28	Table 1	・Added "PCTs" to B05 ・Added "PFOS" and "2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole" ・Changed "Nickel and Nickel compounds" to Nickel ・Changed target substances of Specific Phthalates

		Table 14,15	・Newly added
6	2009.04.17	Table 1 Table 9 Table 10 Table 13	・Added SVHC for REACH ・PVC: Added Level 2. ・HCFC: setting the new abolition date ・PVC: added uses of Level 1&2 ・Asbestos: Changed uses from Level 3 to Level 1

	SANYO Group	Date: April 17, 2009
Edition 6	**Management Standards for Environmentally Hazardous Substances (Edition 6)**	

0. Basic Policy

Under these standards, the substances and uses designated as Level 1 are not permitted to be used in products. However, the substances for which acceptable concentrations are established are permitted as long as the maximum value is not exceeded, but this acceptable concentration must not be exceeded, even as an impurity.

(1) For substances that can be measured quantitatively, acceptable concentrations and measurement standards are set considering the measurement instruments and the laws and regulations.

(2) For substances that are difficult to measure quantitatively, documentation must be provided to clearly show that these substances have not been used.

Further, these standards represent the essential standards as basic matters to be observed by SANYO Electric Group and in the case that an individual business base of SANYO Electric Group has independently and additionally specified environmentally hazardous substances or stricter management standards, such substances must be controlled or such standards observed.

1. Definition of terms

（1）Management level

The following 3 classifications are set as the management levels

No.	Management level	Management level for environmentally hazardous substances
1	Level 1	These substances and their uses are prohibited effective immediately. However, they are permitted if the content is below the acceptable concentration, but they must not exceed the acceptable concentration, even as an impurity.
2	Level 2	These substances and their uses are prohibited after a specified date. At the end of the deadlines indicated in the tables, these substances shall be designated as Level 1, and may not be contained in parts or materials in amounts over the aacceptable concentrations. (However, this does not include spare parts for upgrade or repair of products produced prior to the date concerned.)
3	Level 3	Although there are no deadlines or reduction targets set for these substances at this time, they are considered to be substances whose content and use should be reduced in parts and materials, and that should be managed accordingly.

（2）Content

”Content” indicates a substance has been added, filled, mixed, or adhered into / onto parts or devices contained in products, or into / onto materials, supplementary materials, or packaging, regardless of whether or not it was intentional (including cases where the substance is mixed into or adhered onto the product unintentionally in the manufacturing process).

（3）Impurity

”Impurity” indicates a natural impurity found in a natural raw material used for manufacturing that cannot be completely removed from a refining process by technology, or an impurity created in a compound reaction process that cannot be completely removed by technology, and is not considered to be part of product “content.”

However, substances called “impurities” to distinguish them from raw materials are considered as content when they are used for the purpose of changing the characteristics of materials.

In the case of substances with a designated acceptable concentration as a Level 1 management substance, the substance must not exceed the acceptable concentration concerned, even as an impurity.

2. Management standards for environmentally hazardous substances

The list of substance groups designated as environmentally hazardous substances by the Sanyo Group and their management standards are shown in Table 1. Also, the target uses, their abolition date, and measurement standards are shown in Tables 2 and after on the following item 3, as reference information.

Table 1: List of Environmentally Hazardous Substance Groups and their Management Standards

Classification	Substance Group No.	Substance	Management Level			Level 1 Acceptable Concentration*9	Reportable Level	Target Uses *8
			1	2	3			
Metals and Metal Compounds *1	A05	Cadmium and Cadmium Compounds	●		●	Below 100ppm	If the actual content is known, report the facts regardless of the threshold value	See Table 2
	A07	Hexavalent Chromium Compounds	●		●	Below 1000ppm	Same as above	See Table 5
	A09	Lead and Lead Compounds	●		●	Below 1000ppm	Same as above	See Table 3
	A10	Mercury and Mercury Compounds	●		●	Below 1000ppm	Same as above	See Table 4
	A17	Tributyl Tin Oxide (TBTO)	●			Prohibited(except impurities)	Same as above	
	A18	Tributyl Tins & Triphenyl Tins	●			Prohibited(except impurities)	Same as above	
Halogenated organic compounds	B02	Polybrominated Biphenyls (PBBs)	●			Below 1000ppm	Same as above	See Table 6
	B03	Polybrominated Diphenyl Ethers (PBDEs)	●			Below 1000ppm	Same as above	See Table 7
	B05	Polychlorinated Biphenyls (PCBs) & Polychlorinated Terphenyls(PCTs)	●			Prohibited(except impurities)	Same as above	
	B06	Polychloronapthalenes (Cl => 3)	●			Prohibited(except impurities)	Same as above	
	B09	Short Chain Chlorinated Paraffins *2	●			Below 1000ppm	Same as above	See Table 8
Others	C01	Asbestos	●			Prohibited(except impurities)	Same as above	See Table 13
	C02	Specific Azo Colorants (forming certain amines) *3	●			Prohibited(except impurities)	Same as above	
	C04	Ozone Depleting Substances	●	●	●	Prohibited(except impurities)	Same as above	See Table 9
	C06	Radioactive Substances	●		●	Prohibited(except impurities)	Same as above	See Table 12
Metals and metal compounds *1	A01	Antimony and Antimony Compounds			●		Same as above	
	A02	Arsenic and Arsenic Compounds			●		Same as above	
	A03	Beryllium and Beryllium Compounds			●		Same as above	
	A04	Bismuth and Bismuth Compounds			●		Same as above	
	A11	Nickel *5			●		Same as above	
	A13	Selenium and Selenium Compounds			●		Same as above	
Halogenated organic compounds	B08	Brominated Flame Retardants *6			●		Same as above	
	B07	Vinyl Chloride Polymer (PVC)	●	●	●	Below 1000ppm	Same as above	See Table 10
Others	C05	Specific Phthalates *7			●		Same as above	
	Z01	Perfluorooctane sulfonates (PFOS) *10	●			Below 1000ppm or Below 1 μ g/m^2	Same as above	See Table 14
	Z02	2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole (CAS No.3846-71-7)	●			Prohibited(except impurities)	Same as above	See Table 15
SVHC *11	Z03	Anthracene (CAS No. 120-12-7)			●		Same as above	
	Z04	4,4'- Diaminodiphenylmethane (CAS No. 101-77-9)			●		Same as above	
	Z05	Cobalt dichloride (CAS No. 7646-79-9)			●		Same as above	
	Z06	5-tert-butyl-2,4,6-trinitro-m-Xylene (musk xylene) (CAS No. 81-15-2)			●		Same as above	

*1 Including alloyed metal
*2 Short chain chlorinated paraffins (C10-13)
*3 The target applications are limited to leather and textile products and those parts that may come into direct contact with human skin for prolonged periods of time (certain amines are the substances listed in Appendix 2).
*5 The target applications are limited to parts that may come into direct contact with human skin for prolonged periods of time
*6 Brominated flame retardants except for PBBs and PBDEs
*7 Only applies to the following 6 compounds

- Bis (2-ethylhexyl) phthalate (DEHP) (CAS No.117-81-7)
- Dibutylphthalate (DBP) (CAS No.84-74-2)
- Diisononyl phthalate (DINP) (CAS No.28553-12-0)
- 1,2-Benzenedicarboxylic acid diisodecyl ester (DIDP) (CAS No.26761-40-0)
- Butyl benzyl phthalate (BBP) (CAS No.85-68-7)
- Di-n-octyl phthalate (DNOP) (CAS No.117-84-0)

*8 Uses of any substances not listed are targeted
*9 Acceptable concentration indicates the concentration in a homogeneous material.
"Homogeneous material" means material that cannot be mechanically separated into different materials. "Mechanical separation" means, in principle, separation of materials through mechanical actions such as the processes of removing screws, cutting, crushing, grinding, or sanding. For example with chromate processed sheet metal, the plating layer becomes the "homogeneous material."
*10 Refer to appendix 3
*11 Relationship between SVHC for REACH published on October 28, 2008 and SANYO substance group No.

NO.	Substance name (English)	Substance name (Japanese)	CAS number	Sanyo Substance group No.
1	Anthracene	アントラセン	120-12-7	Z03
2	4,4'- Diaminodiphenylmethane	4,4'-メチレンジアニリン	101-77-9	Z04
3	Dibutyl phthalate	フタル酸ジブチル	84-74-2	C05
4	Cobalt dichloride	塩化コバルト(Ⅱ)	7646-79-9	Z05
5	Diarsenic pentaoxide	五酸化二ヒ素	1303-28-2	A02
6	Diarsenic trioxide	三酸化二ヒ素	1327-53-3	A02
7	Sodium dichromate, dihydrate	ニクロム酸ナトリウム二水和物	7789-12-0	A07
8	5-tert-butyl-2,4,6-trinitro-m-Xylene (musk xylene)	マスクキシレン	81-15-2	Z06
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	フタル酸ジ(2-エチルヘキシル)	117-81-7	C05
10	Hexabromocyclododecane (HBCDD)	ヘキサブロモシクロドデカン	25637-99-4	B08
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	短鎖型塩化パラフィン (炭素鎖長10～13)	85535-84-8	B09
12	Bis(tributyltin)oxide	トリブチルスズオキシド	56-35-9	A17
13	Lead hydrogen arsenate	ヒ酸鉛	7784-40-9	A02、A09
14	Triethyl arsenate	トリエチルヒ酸塩	15606-95-8	A02
15	Benzyl butyl phthalate	フタル酸ブチルベンジル	85-68-7	C05

3. Principal targeted substances, prohibited delivery time limits, and measurement standards for environmentally hazardous substances

Table 2: Cadmium and Cadmium Compounds

Substance name: Cadmium and cadmium compounds		
Explanation: All substances containing the element cadmium including metal, alloys, inorganic compounds, organic compounds, inorganic salts, and organic salts, are targeted.		
	Target	Abolition date
Level 1	All uses except for Level2 and Level 3 E.g. ・Packaging materials (See Table 11) ・Stabilizers, pigments, and dyes used on plastic materials (including rubber) (Electrical cord insulation, remote control unit buttons, binding bands, electronic component coating resin, product cabinets, labels, and phonograph records, etc.) ・Paint and ink ・Photographic film ・Fluorescent lights (small lamps and striplights) ・Electrical contacts such as DC motors, switches, replays, and breakers ・Thermal fuses ・Pigments and dyes for glass and glass paint (pigments and dyes used in glass, and paint for glass) ・Fluorescent substances contained in fluorescent display devices, and CdS photoconductive cells ・Glass frits, etc. ・Surface processing (plating, etc.) and coatings	Effective immediately (starting July 1, 2005) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
	・Cadmium that is present in metal parts including zinc die casts, brass, etc. Soluble cadmium that is present in artificial leather made of Vinyl Chloride Polymer (PVC): Refer to Table 10	Effective immediately (Starting January 1, 2006) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
Level 3	・All batteries and batteries packs containing cadmium (conforming to the battery directive)	
	<RoHS exemption> ・Electric point and plating excluding uses banned by the amended EU Directive 76/769/EEC “91/338/EEC”(Substances without alternatives for plating electrical contacts needed for high reliability) ・Optical glass and filter glass	

Level 1 acceptable concentration: Less than 100 ppm (in homogenous, homogenous materials, or materials) (Products other than scope of RoHS directive :Less than 75 ppm in plastic, paint and ink, etc.) Reportable: If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.
[Measurement Standards] Measurement Targets: Plastics (including rubber), paints, and inks Standard determination methods are inductively coupled plasma emission spectrometry: ICP-AES and ICP-OES, atomic absorption spectrometry: AAS, inductively coupled plasma mass spectrometry: ICP-MS. However, another device may be used if the results can be guaranteed. (e.g. Energy Dispersive X-Ray Fluorescence Spectrometer (EDX))

Table 3: Lead and Lead Compounds

Substance name: Lead and lead compounds		
Explanation: All substances containing the element lead including metal, alloys, inorganic compounds, organic compounds, inorganic salts, and organic salts, are targeted.		
	Target	Abolition date
Level 1	All uses except for Level2 and Level 3 E.g. ・Packaging material (see Table 11) ・Lead in printed circuit boards used for paint, pigment, or ink ・Surface processing of exterior electrodes and lead terminals in parts ・Stabilizers, pigment, or paint in plastic materials (including rubber) used in AC adapters, power cords, connection cords, remote commanders, mice, and equipment ・Ink or paint used in equipment ・Solder lead content of 1000 ppm or higher for solder where the lead content is less than 85 wt% ・Any kind of alloy with lead content higher than the acceptable concentration (*1) (including solder material)	Effective immediately (starting July 1, 2005) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
	・Lead used for stabilizers and additives for electroless gold or nickel plating Soluble lead that is present in artificial leather made of Vinyl Chloride Polymer (PVC): Refer to Table 10	Effective immediately (starting January 1, 2005) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
Level 3	・All batteries and battery packs containing lead (conforming to the battery directive)	

＜RoHS exemption>
・High fusion-point solder for joining parts and devices (solder with lead content of 85 wt% or more)
・ Electronic ceramic parts (piezoelectric elements, ceramic dielectric materials, PTC etc.)
・Optical glass and filter glass
・Glass materials used for picture tubes, electronic parts, or fluorescent display tubes
Conductive paste, (silver and copper paste), adhesive, glass frit, and sealants for glass materials used in electronic parts
・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.
・Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
・The following alloys containing lead (*1)

Alloy type	Acceptable lead concentration
Steel	Less than 0.35 wt%
Aluminum alloy	Less than 0.4 wt%
Copper alloy	Less than 4 wt%

・Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications (with a view to setting a specific time limit for this exemption)
・Lead used in compliant-pin VHDM (Very High Density Medium) connector system
・Lead as a coating material for a thermal conduction module c-ring
・Lead-bronze bearing shells and bushes
・Lead in linear incandescent lamps with silicate coated tubes.
・Lead halide as radiant agent in High Intensity Discharge(HID) lamps used for professinal reprography applications.
・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 (BaSi2O5:Pb) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr, Ba)2MgSi2O7:Pb).
・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).
・Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).

Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials)
(Products destined for Denmark other than scope of RoHS directive :Less than 100 ppm according to S01012)

Reportable level: If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.

[Measurement Standards] Measurement Targets: Plastics (including rubber), paints, and inks
Standard determination methods are inductively coupled plasma emission spectrometry: ICP-AES and ICP-OES, atomic absorption spectrometry: AAS, inductively coupled plasma mass spectrometry: ICP-MS. However, another device may be used if the results can be guaranteed. (e.g. Energy Dispersive X-Ray Fluorescence Spectrometer (EDX))

Table 4: Mercury and Mercury Compounds

Substance name: Mercury and mercury compounds		
Explanation: All substances containing the element mercury including metal, alloys, inorganic compounds, organic compounds, inorganic salts, and organic salts, are targeted.		
Target		Abolition date
Level 1	All uses except for Level2 and Level 3 E.g. ・Packaging material (see Table 11) ・Pigment, paint, and ink ・Timers ・Formulation for plastic ・Compact fluorescent lights: When the content per unit is 5 mg or more ・Striplights: When the content per unit is 10 mg or more ・Mercury used for sanitization or sterilization lamps in household products (including items where the content per unit is less than 5 mg) ・Relays, switches, and sensors that use mercury for contact points	Effective immediately (starting July 1, 2005) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
Level 3	・All batteries and battery packs that include mercury (conforming to the battery directive: less than 5 mg)	
	<RoHS exemption> ・Lamps other than compact fluorescent lights or striplights (high-pressure mercury arc lamps etc.) ・Compact fluorescent lights: When the content per unit is less than 5 mg ・The following straight flourescent lamps for general purposes ①halophosphate: less than 10 mg ②triphosphate with normal lifetime: less than 5 mg ③triphosphate with long lifetime: less than 8 mg ・Straight flourescent lamps for special purposes	
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level: If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 5: Hexavalent Chromium Compounds

Substance name: Hexavalent chromium compounds		
Explanation: All substances containing the element hexavalent chromium including metal, alloys, inorganic compounds, organic compounds, inorganic salts, and organic salts, are targeted.		
Target		Abolition date
Level 1	All uses except for Level 3 E.g. ・Packaging material (see Table 11) ・Components such as pigment in ink or paint, or plating rust prevention (screws, steel sheets, etc.)	Effective immediately (starting July 1, 2005) (But starting July 1, 2007 for products produced other

		than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
Level 3	Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators.	
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 6: Polybrominated biphenyls (PBBs)

Substance name: Polybrominated biphenyls (PBBs)		
Target		Abolition date
Level 1	• All uses including flame retardants in plastic	Effective immediately
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		
[Measurement Standards] Measurement Targets: Plastics (including rubber) Gas Chromatography-Mass Spectrometry (GC−MS) is the standard. Alternatively, an Energy Dispersive X-Ray Fluorescence Spectrometer (EDX) can be used to measures the entire amount of Bromine, provided it can be confirmed that there is none contained, or it is below the acceptable concentration. However, another device may be used if the results can be guaranteed.		

Table 7: Polybrominated Diphenyl Ethers (PBDEs)

Substance name: Polybrominated diphenyl ethers (PBDEs)		
Target		Abolition date
Level 1	・All uses including flame retardants in plastic ・Decabromodiphenyl ether as a flame retardant in plastics	Effective immediately (starting July 1, 2005) (But starting July 1, 2007 for products produced other than in Japan, not destined for the EU, or January 1,2006 for products applied to J-Moss regulations, produced other than in Japan, destined for Japan.)
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

[Measurement Standards] Measurement Targets: Plastics (including rubber) Gas Chromatography-Mass Spectrometry (GC−MS) is the standard. Alternatively, an Energy Dispersive X-Ray Fluorescence Spectrometer (EDX) can be used to measures the entire amount of Bromine, provided it can be confirmed that there is none contained, or it is below the acceptable concentration. However, another device may be used if the results can be guaranteed.

Table 8: Short Chain Chlorinated Paraffins

Substance name: Short chain chlorinated paraffins		
Target		Abolition date
Level 1	・All uses including printed circuit boards and product cabinets	Effective immediately (starting September 28, 2005)
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 9: Ozone Depleting Substances

Substance name: Ozone depleting substances		
Target		Abolition date
Level 1	• CFCs (Montreal Protocol Annex A Group I) • Halon (Montreal Protocol Annex A Group II) • Other CFCs (Montreal Protocol Annex B Group I) • Carbon tetrachloride (Montreal Protocol Annex B Group II) • 1,1,1-trichloroethane (Montreal Protocol Annex B Group III) • Bromochloromethane (Montreal Protocol Annex C Group III) • HBFCs (Montreal Protocol Annex C Group II) • Methyl bromide (Montreal Protocol Annex E) • HCFCs (Montreal Protocol Annex C Group I：Products produced in Japan, destined for Japan, EU,and Australia) • HCFCs (Montreal Protocol Annex C Group I：all uses except refrigerant in air−conditioning units)	Effective immediately
Level 2	• HCFC for refrigerant in air−conditioning units (Products produced other than in Japan, destined for Taiwan)	Starting from products produced on and after January 1, 2010
	• HCFC for refrigerant in air−conditioning units (Products produced other than in Japan, destined for China)	Starting from products produced on and after January 1, 2013
Level 3	• HCFCs for refrigerant in air−conditioning units (Products produced other than in Japan, not destined for Japan, EU, Australia, China and Taiwan)	
Level 1 acceptable concentration: Prohibited(except impurities) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 10: Vinyl Chloride Polymer

Substance name: Vinyl chloride polymer		
Target		Abolition date
Level 1	• Packaging materials(Products produced in Japan)	Effective immediately (starting April 1, 2006)
	• The following Vinyl chloride polymer (PVC) for artificial leather (destined for China) ・Vinyl chloride polymer (PVC) including Vinyl chloride monomer above 5ppm ・Vinyl chloride polymer (PVC) including soluble lead above 90ppm ・Vinyl chloride polymer (PVC) including soluble cadmium above 75ppm ・Vinyl chloride polymer (PVC) including volatiles above 20g/m2	Effective immediately
	• Packaging materials(Products produced other than in Japan) • Internal wiring in electrical and electronic new products. (except applications impossible to maintain quality or safety without it, materials specified by law or regulation, materials specified by customer, etc.)	starting April 1, 2011
Level 3	• All uses except Level 1	
Level 1 acceptable concentration: Less than 1000 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 11: Heavy Metals in Packaging Materials

Substance names: Heavy metals in packaging materials (cadmium, lead, mercury, and hexavalent chromium)		
Target		Abolition date
Level 1	• Packaging material (containing a combined total of 100 ppm or higher for mercury, cadmium, hexavalent chromium, and lead in each part, ink, or paint that makes up the packaging)	Effective immediately
Level 1 acceptable concentration: Less than 100 ppm (in homogenous, homogenous materials, or materials) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 12: Radioactive substances

Substance names: Radioactive substances		
Target		Abolition date
Level 1	• Glow starters	Effective immediately (starting January 31, 2005)
Level 3	• All uses except Level 1	
Level 1 acceptable concentration: Prohibited(except impurities) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 13: Asbestos

Substance names: Asbestos		
Target		Abolition date
Level 1	･All uses except for Level 3 ･Chrysotile in gasket and packing （destined for the EU）	Effective immediately
	･Chrysotile in gasket and packing （Products produced in Japan, destined for Japan）	Effective immediately(starting September 1, 2006)
	･Chrysotile in gasket and packing （Products produced other than in Japan ,not destined for the Eu and Japan）	Effective immediately(starting April 1, 2009)
Level 1 acceptable concentration: Prohibited(except impurities) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 14: Perfluorooctane sulfonates (PFOS)

Substance names: Perfluorooctane sulfonates (PFOS)		
Target		Abolition date
Level 1	･All uses except for below [Exemption] - Photographic coatings applied to film, papers, or printing plates - Photoresists or anti reflective coatings for photolithography processes	Effective immediately(starting April 1, 2008)
Level 1 acceptable concentration: Below 1000ppm or below 1 μ g/m^2 Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Table 15: 2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole

Substance names: 2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole(CAS No.3846-71-7)		
Target		Abolition date
Level 1	Ultraviolet protectants and ultraviolet absorbers applied to decorative laminate, developing papers, molded plastic parts Wax, paint, adhesive, seal, aromatic	Effective immediately(starting April 1, 2008)
Level 1 acceptable concentration: Prohibited(except impurities) Reportable level : If the actual content is known, including intentional additives or impurities, report the content facts regardless of the threshold value.		

Finally, even those substances and uses not stipulated by these standards must conform to all laws and

regulations concerning prohibited and restricted substances in each country or region concerned.

Further, in the case that an individual business base of SANYO Electric Group has independently and additionally specified environmentally hazardous substances or stricter management standards, such substances must be controlled or such standards observed.