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People's Republic of China Electronic Industry Standard

SJ/T 11364–2014
Replaces SJ/T 11364–2006

Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products

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Preface

This Standard is drafted according to the rules prescribed in GB/T1.1-2009

This Standard will replace and nullify SJ/T 11364—2006, *Marking Requirements for Control of Pollution Caused by Electronic Information Products*.

In comparison with SJ/T 11364—2006, this Standard has made major changes as follows:

- a) Adjusting the name and applicable scope, i.e., “electronic information products” in SJ/T 11364—2006 are changed to “electronic and electrical products,” and “pollution control” is changed to “restricted use of hazardous substances”;
- b) Adding explanation for reference application in logistics processes (see Section 1);
- c) Deleting GB 18455, *Packaging Recycling Markings*, in the normative reference document (See Section 2 of SJ/T 11364-2006);
- d) Adding the terms and definitions of “electronic and electrical products,” “hazardous substance” and “logistics” (see 3.1, 3.2 and 3.7) and deleting the terms and definitions concerning “electronic information products,” “toxic and hazardous substance,” “producer,” “importer” and “packaging material” in SJ/T 11364—2006 (see 3.1, 3.2, 3.4, 3.5 and 3.7 in SJ/T 11364—2006);
- e) Adding the requirement for digital format marking option for electronic and electrical products with display functions;
- f) Deleting the name labeling requirements for packing materials (see Section 9 of SJ/T 11364—2006).

Please note that some contents of this document may involve patents. The issuing organization of this document shall not be responsible for identifying these patents.

This Standard is proposed by the Electronic Information Product Pollution Control Standards Working Group of the Ministry of Industry and Information Technology.

This Standard shall be subject to the jurisdiction of the China Electronic Standardization Institute (CESI).

CESI and Motorola (China) Electronics Co., Ltd. were responsible for the drafting of the standard.

The units that participated in drafting of this standard: Please see Appendix A.

The main drafters for this standard: Meng Yang, Shuoxiang Han, and Xinjian Zhang.

This standard was first issued in 2006.



Introduction

Due to the demand for technologies and product features, some electronic and electrical product materials contain hazardous substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers, etc. In order to prevent products that contain the aforementioned substances from resulting in adverse effects on human health and the environment after their use and being discarded and to further standardize the markings for electronic and electrical products, the former Ministry of Information Industry issued SJ/T 111364—2006, *Marking for Control of Pollution Caused by Electronic Information Products*, based on *Measures for the Control of Pollution from Electronic Information Products* (Order No. 39 of the former Ministry of Information Industry) and by referencing related international standards and industrial practices.

With the need for revision of the *Management Methods for the Control of Pollution from Electronic Information Products* and the needs of enterprises for image display markings and logistics process markings during the standard's use for their products, [complete implementation of] SJ/T 111364—2006 has gradually shown signs of difficulties. The goal of drafting this Standard is to solve the aforementioned issues and provide further detail and perfect the marking requirements for electronic and electrical products in order to improve the environment, facilitate the implementation of the standard, implement national policies and regulations, and reduce enterprise management costs.



Marking Requirements for Restricted Use of Hazardous Substances in Electronic and Electrical Products

1. Scope

This standard specifies the marking requirements for hazardous substances in electronic and electrical products, the environmental protection use period and recyclability.

This standard applies to the electronic and electrical products sold in the People's Republic of China and also may be applied to electronic and electrical product logistics.

2. Normative Cited Documents

The documents listed below are essential to the application of this document. For the cited documents with the dates indicated, only the versions with the dates indicated are applicable to this document; for the cited documents without the dates indicated, only the latest versions (including all the amendments) are applicable to this standard.

GB/T 26572 The requirements for concentration limits for certain restricted substances in electronic and electrical products.

3. Terms and Definitions

The following terms and definitions are applicable to this standard.

3.1 Electronic and electrical products

EEP

These refer to the devices and accessory products with rated working electrical voltages that do not exceed 1500V direct current and do not exceed 1000V alternating current and function by means of current or electromagnetic fields and generate, transmit and measure such currents and electromagnetic fields.

3.2 Hazardous Substances

These refer to lead and its compounds, mercury and its compounds, cadmium and its compounds, hexavalent chromium compounds, polybrominated biphenyls, and polybrominated diphenyl ethers that are contained in the electronic and electrical products.

Note: References to "contained" in this standard mean that the contents of hazardous substances exceed the limit requirements set forth in GB/T 26572.

3.3 Environmentally Friendly Use Period

Refers to the period during which the hazardous substances contained in the electronic and electrical products will not leak or mutate suddenly under normal operating conditions and will not result in serious environmental pollution or cause serious bodily injury to the user or damage to their assets during the normal use by the user of the



electronic and electrical products.

3.4 Recovery

Refers to the process of treatment of discarded products so that they can fulfill the requirements of their original use purpose or be used for other purposes, including energy recovery and utilization.

[GB/T 20861-2007, definition 2.11]

3.5 Logistics

Refers to the process of flow of the physical goods from the location of supply to receiving location. It is an organic combination of transportation, storage, loading and unloading, transfer, packaging, processing, distribution, information processing and other basic functions based on the actual needs.

[GB/T 18354-2006, definition 2.2]

4. General Rules

All electronic and electrical products that are sold in the People's Republic of China shall be marked with Logos required for the restricted the use of hazardous substances in electronic and electrical products in accordance with the requirements set forth in this standard. If the sizes, shapes or surface materials or functions of products prevent direct marking on the products, [the markings] shall be specified in the product instructions.

With respect to the electronic and electrical products that are purchased for manufacturing, the supplier need not provide the aforementioned markings but shall provide to the purchaser all necessary information required for marking. Correspondingly, the purchaser shall mark the electronic and electrical products that they manufacture, and the scope of marking shall include that for the electronic and electrical products purchased for manufacturing.

When the markings are provided in the product instructions, they can be in a paper manual, and instruction disc (CD/DVD), or packaging material; in addition to the abovementioned methods, the instructions for electronic and electrical products purchased for manufacturing can also be provided on the company website. In this case, the product instructions shall include clarification of the related steps for looking up the related marking information on the [company] website.

5. Electronic and Electrical Product Restricted Substance Use-Restriction Logos

Please refer to Figure 1 and Figure 2 for marking for the design of the markings for the restricted use of hazardous substances in electronic and electrical products.





Note: The number in Figure 2 is only for demonstration and will be replaced with the corresponding environmental protection use period of the product in actual use.

Figure 1: Logo 1

Figure 2: Logo 2

5.2 Interpretation of the Logos

The contents of the logos for the restricted use of hazardous substances in electronic and electrical products include three components: the content of hazardous substances in the electronic and electrical products, the environmental protection use period of the electronic and electrical products, and the recyclability of the electronic and electrical products.

Figure 1 is generally green, demonstrating the environmental protection characteristic of a product, namely that the product does not contain any hazardous substances. The artistic style “e” in the middle of the logo stands for “electrical,” “electronic” and “environmental,” signifying a green and environmental electronic and electrical product; the outer, curved arrows form a circulating circle, demonstrating that the electronic and electrical product can be recycled. The entire logo indicates that this electronic and electrical product does not contain any hazardous substances and is a green environmentally friendly product, which can be recycled after being discarded and should not be casually discarded.

Figure 2 is generally orange, highlighting the attribute of caution, i.e., the product contains certain hazardous substances. The replaceable number in the middle of the image indicates the environmental protection use period for the electronic and electrical product; the image’s outer circle is also a circulating circle formed by lines with arrowheads, demonstrating that the electronic and electrical product can be recovered. The implication represented by the entire logo is: this electronic and electrical product contains certain hazardous substances and can be used safely during its environmental protection use period and should enter into the recycling system after its environmental protection use period.

5.3 Colors

It is recommended that the logo shown in Figure 1 uses green (C: 85, M:30, Y: 85, K: 20).

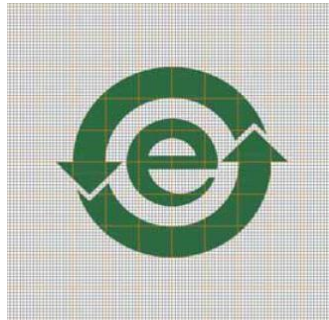
It is recommended that the logo shown in Figure 2 uses orange (C: 0, M: 75, Y: 100, K: 0).

5.4 Specifications

5.4.1 Specifications for Logos

The proportion for the lines in Figure 1 and Figure 2 is shown in Figures 3 and 4 (number of grids is 100×100). The font for the number in Figure 2 is Impact, and the ratio of its height to the inner and outer diameters of the circle is 5:8:12.





Note: The “Impact” font can be obtained from office or word processing software.

Figure 3: Image specification of logo 1

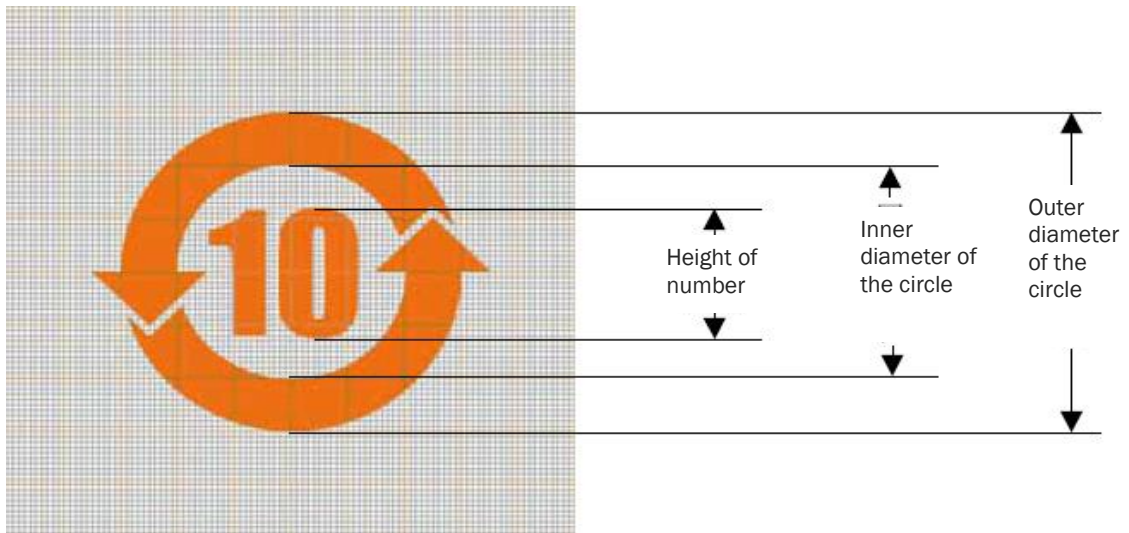


Figure 4: Image specification of logo 2

5.4.2 Marking Specifications

Manufacturers or importers shall choose suitable specifications for the logo according to the sizes of the electronic and electrical products and components; however, its smallest area shall not be smaller than 5mm×5mm.

6. Marking Requirements

6.1 General Requirements

6.1.1 An electronic and electrical product shall use the marking for the restricted use of hazardous substances in the electronic and electrical product in accordance with the standard’s requirements, and the marking shall be clear, distinguishable, visible, fade resistant and difficult to remove.

6.1.2 Generally, the logo for the restricted use of hazardous substances in the electronic and electrical product



shall be marked directly on the product through molding, spray paint, sticking or printing or using the method specified in 6.1.3.

If an electronic and electrical product satisfies one of the following conditions, the logo for the restricted use of hazardous substances in the electronic and electrical product may not be marked directly on the product but shall be marked according to the method specified in 6.1.3 or be specified in the product instructions:

- a) A maximum surface area less than 5×10^3 mm²;
- b) An irregular shape, e.g., a very thin and long cable with a very large surface area;
- c) Incapable of being directly marked on the surface of the product due to the surface material or functions.

6.1.3 An electronic and electrical product with visual display functions may use a digital format mark for the restricted use of hazardous substances in the electronic and electrical product if it product satisfies all of the following a) - f) conditions:

- a) The digital format logo for the restricted use of hazardous substances in the electronic and electrical product must be displayed every time the product is launched. When the logo is displayed by itself, the display time shall not be less than 2s; when the logo is displayed together with other information, the display time shall be extended appropriately, and the size and displaying position shall be adjusted to ensure the identification of the logo.
- b) The user may view the digital format logo for the restricted use of hazardous substances in the electronic and electrical product through the user interface during the operation of the product.
- c) If Figure 2 is used for the marking, the user may view the names and contents of the hazardous substances in the product [i.e., the table] through the user interface, and the marking format and marking requirements shall satisfy the provisions of 6.2.2.
- d) The product instructions should clarify the steps for looking up the logos and forms mentioned in b) and c) above.
- e) The digital format logo for the restricted use of hazardous substances in the electronic and electrical product is read-only in the factory setting, and the contents of the logo shall not be readily modifiable through software.
- f) Manufacturers shall retain the relevant data of the digital format logos for the restricted use of hazardous substances in the electronic and electrical products; if Figure 1 is used for the marking, the records shall be retained more than 3 years over the product life; if Figure 2 is used for the marking, the records shall be retained more than 3 years over the environmental protection use period. When a product is damaged or cannot display properly, the manufacturer shall provide convenient access to the data.

6.1.4 If the logo for the restricted use of hazardous substances in the electronic and electrical product is used on a product, it shall normally be marked on the front of the product, side or back where function where function keys are located and other visible places. If restricted by the functions and design of appearance so that it is not possible to place the marking in a prominent place, it shall be placed at other visible places easily detected by the consumer.



6.2 Hazardous Substance Marking [Table]

6.2.1 An electronic and electrical product shall be marked in accordance with this standard to indicate whether it contains any hazardous substances. If there are no hazardous substances contained in the product, Figure 1 shall be chosen for the marking. If the product contains hazardous substances, Figure 2 shall be chosen for the marking. In addition, the names and contents of the hazardous substances shall be provided in the product instructions in accordance with the requirements stipulated in 6.2.2.

6.2.2 Manufacturers and importers who manufacture or import electronic and electrical products that contain hazardous substances shall specify the names and contents of hazardous substances in the product instructions and mark them on the parts where they are contained by following the format specified in Table 1.

- a) The first row in Table 1 is the header, the first column is the part name, the other columns are contents of the hazardous substances, and the last row is used entirely for the meanings of the symbols and explanation for other related matters.
- b) If a certain hazardous substance does not exist in said part, namely said hazardous substance contained in all of the homogeneous materials for this part is below the concentration limits of GB/T 26572, then mark “O” for the corresponding content of said hazardous substance. If a certain hazardous substance is contained in said part, namely said hazardous substance contained in at least one of the homogeneous materials used for this part is above the concentration limit of GB/T 26572, then mark “X” for the corresponding content of said hazardous substance.
- c) The height of the Chinese characters and symbols used in the marking shall be clear and legible and not be smaller than 1.8 mm.

Table 1 Marking Styles for the Names and Contents of the Hazardous Substances

Part Name	Hazardous Substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)

This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

(Enterprises may further provide in this box technical explanation for marking “X” based on their actual circumstances.)

6.3 Environmental Protection Use Period Marking

The manufacturer and importer shall determine and mark the environmental protection use period (unit in years (a)) of an electronic and electrical product that contains hazardous substances in reference to SJ/Z 11388. When Figure 2 is chosen for the marking, the number in the middle of the logo shall be replaced with the actual environmental protection use period of the product, and the product instructions shall provide detailed explanations for the use conditions of the guarantee of the product during the environmental protection use period and special markings for the parts.

The date of manufacture for the electronic and electrical product is the start of environmental protection use period. The date of manufacture shall be marked on the product and packaging of the product, and the format of marking may use year, year and week, year and month, year and month and day, etc. or may employ the product marking method generally used by the enterprise, e.g., a product serial number or product barcode that includes the date of manufacture. When a product is marked with the product serial number or product barcode, the manufacturer or importer shall provide consumers or the [government] supervision department with service necessary to [enable] inquiries on the date of manufacture.

6.4 Recovery Marking

The manufacturer or importer of electronic and electrical products shall use Figure 1 or Figure 2 as the recovery mark. A product marked with the logo for the restricted use of hazardous substances in electronic and electrical products indicates that [the product] is recoverable.



Appendix A

(Normative Appendix)

List of Units Participating in the Drafting of This Standard

(Listed in the order of the pinyin of the first letter of each name and not intended to represent ranking)

- » Agilent Science and Technology Limited
- » Ericsson (China) Co., Ltd.
- » Emerson Electronics (China) Investment Co., Ltd
- » Epson (China) Co., Ltd.
- » Beijing Pony Lab for Physical and Chemical Analysis
- » Beijing Capital Nokia Mobile Telecommunications Co., Ltd.
- » AMD Semiconductor (China) Co., Ltd.
- » Dell (China) Co., Ltd.
- » Founder Technology Group Corp.
- » Philips (China) Investment Co., Ltd.
- » Academy of Telecommunication Research of the Ministry of Industry and Information Technology
- » Fifth Electronics Research Institute of Ministry of Industry and Information Technology
- » Guangzhou Kingfa Science and Technology Co., Ltd
- » Guangzhou Research Institute of Non-ferrous Metal
- » International Business Machines (IBM) China Limited
- » State Quality Supervision and Inspection Center for Electronic Function and Auxiliary Materials
- » Haier Group Technology Research and Development Center
- » Hangzhou Huasantong Technology Co., Ltd
- » Huawei Technologies Co., Ltd.
- » Huizhou TCL Computer Technology Co., Ltd.
- » Canon (China) Co., Ltd.
- » Jiangsu Electronic Information Product Quality Supervision and Inspection Institute
- » Jinshan Industry (Group) Co., Ltd.



- » Jingdongfang Science and Technology Group Co., Ltd.
- » Konka Group
- » Inspur Co., Ltd.
- » Ricoh China Co., Ltd.
- » Lenovo (Beijing) Co., Ltd.
- » Motorola (China) Electronics Co., Ltd.
- » Nikon (China) Co., Ltd
- » School of Materials Science and Engineering, Tsinghua University
- » NEC (China) Co., Ltd.
- » Hitachi (China) Co., Ltd. Shanghai Branch
- » Alcatel Shanghai Bell Co., Ltd.
- » Shenzhen AOV Testing Co., Ltd.
- » Centre Testing International
- » Panasonic Corporation of China
- » Sony (China) Co., Ltd.
- » TE Connectivity (Shanghai) Co., Ltd
- » SGS SA
- » GE Hi-Tech Material Group (China) Co. Ltd
- » Xiamen Overseas Chinese Electronic Co., Ltd.
- » Sharp (China) Investment Co., Ltd.
- » Hong Kong Lexmark International (China) Co., Ltd.
- » Brother (China) Ltd.
- » Albemarle Chemicals (Shanghai) Co., Ltd.
- » Intel (China) Co., Ltd.
- » China Quality Management Association for Electronics Industry
- » China Hewlett-Packard Co., Ltd.
- » China Household Electrical Appliances Association Discarded Electronic and Electric Products Recycling Branch
- » China Testing & Inspection Institute for Household Electric Appliances
- » China Flame Retardant Society
- » ZTE Corporation



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- » [5] Management Methods for the Control of Pollution from Electronic Information Products, Ministry of Information Industry, February 28, 2006, Order No. 39.
- » [6] Product Marking and Labeling Rules, Bureau of Technical Supervision, November 7, 1997, Jian Fa (1997) No. 172 by the Bureau of Technical Supervision.
- » [7] Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electronic and electrical equipment by the EU.
- » [8] Commission Decision of 18 August 2005, amending Directive 2002/95/EC of the European Parliament and of the council for the purpose of establishing the maximum concentration values for certain hazardous substance in electronic and electrical equipment (2005/618/EC) by the EU.
- » [9] Directive 2011/65 EU on the restriction of the use of certain hazardous substances in electronic and electrical equipment.

