

Serial #3621



China RoHS Regulations

Informational Guidance Notes

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Compiled by Roland Sommer
Principal Consultant
RoHS-International Ltd
www.rohs-international.com



Introduction

This guide was inspired by the UK DTI Government guidance notes for the EU RoHS. It is intended to assist those placing electrical and electronic equipment on the China market to understand, in plain English, the requirements of the Chinese Standard “Measures for Administration of the Pollution Control of Electronic Information Products”, hereafter called the “China RoHS regulations”.

The purpose of these guidance notes is to detail the essential parts from the 300+ pages of information into a concise guide that allows Engineers and Managers to clearly understand the practical requirements for complying with China RoHS. Insofar as is possible, references to the source material are included and readers are urged to refer to the AeA translations or other referenced sources for further information.

Disclaimer

As with EU RoHS the regulations themselves should always be read and understood, as they constitute the law. This guide is informative only and has no legal authority. The original Standards in Chinese are the only documents with legal authority. There is no translation in English with any legal authority.

You should refer to the Standards themselves for a full statement of the legal requirements and in the case of any doubt take your own legal advice. The standards may be revised from time to time, so information may change. Users should take care to keep themselves informed.

To date not all the standards have been finalized and of those that have, not all have been adequately translated into English. We have made our best endeavors to understand the translations such as they are, and to provide guidance to the English speaking companies selling product affected by regulations into China.

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Changes from Version 2.0

Version 3 has numerous changes and additions to previous versions. The February 26th 2007 versions of the Regulation and Standards FAQ have been used and these have changes in the question numbers from the previous versions, so many reference numbers have been changed. Other major changes are:

- 1) New detail from Feb 2007 update on the Date of Manufacture.
- 2) New detail from Feb 2007 update on when disclosure can be made on a website.
- 3) Additions to the list of support and reference material.
- 4) Re-inclusion of the exclusion from scope for Military equipment.
- 5) Reinforcement of the fact that EU RoHS compliant product cannot necessarily use the green “e” logo.
- 6) Updated example disclosure table.
- 7) Further detail on the table requirements.
- 8) Situation for leased product.
- 9) Situation for inter-company sales.

List of Acronyms

ACPEIP	Administration of the Control of Pollution of Electronic Information Products also known as “Management methods for Controlling Pollution by Electronic Information Products” and China RoHS Scope, and “The List”
B2B	Business to Business
B2C	Business to Consumer
CCC	China Compulsory Certification
CoC	Certificates of Compliance
EIP	Electronic Information Products
EFUP	Environment-Friendly Use Period
EUCTP	European Union China Trade Project
FAQ	Frequently Asked Question
PCA	Printed Circuit Assembly
PCB	Printed Circuit Board
RoHS	Restriction of use of Certain Hazardous Substances

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Overview.

China RoHS has a 2 stage approach. Stage one is disclosure of the ‘notifiable’ substances in the product and packaging. There is no requirement to remove the substances from the product. Disclosure is in a prescribed format and all words have to be in Chinese, numbers and SI Units can be “western”. There is product and packaging labelling requirements, a requirement for the date of manufacture to be on the product, and a calculation of the Environmentally Friendly Use Period (EFUP) required. There is no requirement for testing or certification and no involvement with the CCC mark. The enforcement date for Stage One is 1 March 2007

Stage two, anticipated to be late 2007 or 2008 will be an actual prohibition on a subset of the products affected by stage one. This will involve product testing and certification and is likely to be incorporated into the CCC certification. These products will be listed in a document referred to as “The Catalogue” which is expected to be released in 2007.

Compliance with EU RoHS does not give compliance with China RoHS. The term China RoHS has been coined by the western world. MII never refer to their legislation as China RoHS.

China RoHS is significantly different from EU RoHS, however there is some leverage that can be gained. The 6 hazardous substances are the same, as are the Maximum Concentration values in most cases. This means that there is a good deal of leverage that can be gained from the EU RoHS Certificates of compliance, but the major trap is that the EU exemptions are not recognized by China. Lead in the form of PbO (exempt in the EU) in most SMT resistors will exceed the EIP-C limit values of China RoHS. Many Brass and aluminium parts will contain lead under EU exemption. See Article “[Alert -Eu RoHS Compliant does not always mean China RoHS Compliant](#)” from www.rohs-international.com for more details.

Whilst China RoHS does not require removal of the hazardous substances it does require:

1. Labeling of the product.
2. A table in the users guide disclosing the locations of any hazardous substances over the Chinese versions of the MCVs .
3. Marking of the date of manufacture on the product
4. Calculation of the Environmentally Friendly Use Period.
5. Labeling of the packaging.

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The structure of China RoHS

China RoHS is made of a number of standards covering various aspects of the regulations.

The main body of the regulations is the document “Measures for Administration of the Pollution Control of Electronic Information Products” which is supported by a number of other Documents or Standards. In the event of any conflict, the “Measures for Administration of the Pollution Control of Electronic Information Products” takes precedence. Ref Q10 Regulation FAQ

Document	Standard	Purpose	Comment
Measures for the Administration of the Pollution Control of EIP	MII Order # 39	This is the Main regulation	Also known as Management methods for Controlling Pollution by Electronic Information Products
Electronic Information Products Classification and Explanations	Not a Standard	Scope document	Also known as the March 16 2006 Explanatory Note
Requirement for concentration limits for Certain Hazardous Substances in EIP	SJ/T11363/2006	Definition of classes of Homogeneous Material and maximum allowable limits	3 Classes are described, but more essential detail is included in the General Disassembly Requirements Standard
Marking for the Control of Pollution Caused by EIP	SJ/T11364-2006	Labelling and disclosure table	
Testing Methods for Regulated Substances in EIP	SJ/T11365/2006	50 page document detailing preparation and test methods.	Draws heavily on IEC111/54CDV
General rule of Environment-Friendly Use Period of Electronic Information Products	SJ/Z-----	To explain how to calculate the EFUP	Not finalised
General Disassembly Requirements for Testing Hazardous Substances in Electrical and Electronic Products	GB/Z----- 2006	Anatomy of a product breakdown into Homogeneous materials. Further defines the EIP C category.	Not Finalised
Packaging Standard	GB/T 18455-2001	Packaging Recycle Mark	

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The Catalogue	Not yet known	Defines the products that the actual prohibition will apply to.	Expected mid 2007
Lead free standards	Various		

Other supporting documents and referenced material

Document Title	Reference name	Issuer	Comments
Common Q/A for the Administrative Measure on the control of Pollution Caused by Electronic Information Products	Regulation FAQ	MII	We are using the Grace Lin translated version with the Feb 2007 update translation from RoHS-International (48 Q&A)
Common Q&A for the Standards of Pollution Control in Electronic Information Products.	Standards FAQ	MII	We are using the Grace Lin translated version with the Feb 2007 update translation from RoHS-International (54 Q&A)
China RoHS Questions and Answers	AeA Q&A January 2007	AeA	83 Questions and Answers
EU-China Trade Project Final report	EUCTP report	BSI and China Electronics Standards Institute.	
Logo Artwork (in Adobe Illustrator format)	None	MII	
Alert-EU RoHS does not always mean China RoHS Compliant	Referenced by document name	RoHS-International	News Article by RoHS International detailing why EU RoHS compliant product cannot necessarily use the green "e" logo 1
Eight simple steps for converting from EU RoHS to China RoHS compliance	Referenced by document name	RoHS-International	Informational Article on how to maximise leverage from EU RoHS compliance for China RoHS, Written to compliment these guidance notes
EFUP Discussion Paper	Referenced by document name	RoHS-International	Technical paper on the EFUP

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All the documents listed above are available from <http://www.rohs-international.com/china-rohs-documents/> .

Note on the FAQ Document numbering systems:

The “Regulation” FAQ was first issued in May 2006, updated in December 2006 and again in February 2007. There was a change in the question numbers between the May and December issues as questions were added. There was no change in numbers between the December 2006 and February 2007 update as no questions were added or deleted. A number of answers were altered.

The “Standards” FAQ was first issued in December 2006 and was updated in February 2007. Several answers were modified and several questions were deleted so the numbering system changed between these two issues.

Scope

The scope is defined in the “Electronic Information Products Classification and Explanations” document. This is some 35 pages long and translations are freely available at http://www.aeanet.org/GovernmentAffairs/gabl_ChinaRoHSpace0905.asp There is an alternative translation available at <http://www.rohs-international.com/china-rohs/> which has an index making for easier reference. The main differences from the EU scope are the inclusion of some monitoring and control products and Medical Devices and electrical and electronic components. White-ware (washing machines, dryers, refrigerators etc) and toys are excluded. Ref Q5 p 77 EUCTP report, p13 EUCTP report

There is the use of the catch-all “other” at the end of each section in the “Electronic Information Products Classification and Explanations” document. This infers that the products listed are indicative. However, the regulation FAQ Q27 states that products not clearly listed in the above document are out of scope. There will be some risk in taking the Electronic Information Products Classification and Explanations document as an exhaustive list due to the inclusion of the use of the term “other” and also there is additional risk from any errors in translation of the equipment detailed in the lists. It is up to each company to decide how much risk they wish to assume. Our recommendation is to err on the side of caution as the scope is likely to grow.

Components are in scope if sold as a commodity. Resistors, capacitors, connectors, integrated circuits etc are all explicitly listed in the “Electronic Information Products Classification and Explanations” document. This aggregates up into sub components. For example if a controller for a washing

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machine is sold separately, even as a spare, it is within scope Ref Q5 p 77 EUCTP, Regulation FAQ Q14

For any product utilising electronic information technology, if the value of the electrical and/or electronic components in that product comprises 60% or more of the total value, then that product will be deemed to be an EIP. The electronic parts used in the final product must be listed in the “Electronic Information Products Classification and Explanations” document. Ref Q4 p 77 EUCTP. An example of this could be an intelligent refrigerator. If the value of the computer, display and communications parts comprised 60% or greater of the value of the refrigerator, then the refrigerator would be classified as “Computer Industry Product”. This is used as an example only, as normal white-ware is considered out of scope and does not infer that intelligent refrigerators in general are in scope.

The 60% rule is a general judgement method used across many industries in China and hence does not appear in any of the formal documentation. EUCTP report Q4

Prototypes, internally produced test equipment, samples, display products, return for repair and temporarily imported products are out of scope by virtue of not being “put on the market”. Ref Regulation FAQ Q34

Products built in China and exported are not in scope as they are never put on the market in China. Similarly components brought specifically from abroad for assembling export product are not in scope. Ref Regulation FAQ Q33

In-car equipment, when sold to a vehicle manufacturer is out of scope, but if available for sale as a product it is in scope. Ref Regulation FAQ Q15

Batteries are in scope Ref Regulation FAQ Q18

Spare parts are in scope if sold as a commodity. If a controller for a washing machine is sold separately, even as a spare, it is within scope.. Ref Q7 p 77 EUCTP, Regulation FAQ Q16

Blank CDs DVDs tapes and VCDs are in scope, pre-recorded ones are out of scope “temporarily”. Ref Regulation FAQ 2006 Q24

Instruction manuals, and labels not fixed to products are out of scope “temporarily”. Ref FAQ Regulation FAQ Q25

Second hand products are out of scope. Ref Regulation FAQ Q26

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Military equipment is out of scope Ref Standards FAQ Q1

Maximum Concentration Values

There are 3 formal classifications for Maximum Concentration Values

Classification of Materials (Unit)	Definition of Materials (Unit)	Limit requirements
EIP-A	Each homogeneous material composing EIP	The contents of lead, mercury, hexavalent chromium, polybrominated biphenyl, polybrominated diphenyl ether (exclusive of decabromodiphenyl ether) in this category shall not exceed 0.1% and the content of cadmium shall not exceed 0.01%.
EIP-B	Metallic coating of each part in EIP	The hazardous substances including lead, mercury, cadmium, hexavalent chromium in this category shall not be added intentionally.
EIP-C	Small components or materials that cannot be further disassembled under existing conditions in EIP. They generally refer to the products of equal to or less than 4 mm ³ in size.	The contents of lead, mercury, hexavalent chromium, polybrominated biphenyl, polybrominated diphenyl ether (not including decabromodiphenyl ethers) in this category shall not exceed 0.1%, and the contents of cadmium shall not exceed 0.01%.

EIP-B requires disclosure of any passivation based on Hexavalent Chromium. Ref Standards FAQ Q49

If Hexavalent Chromium above the allowable limit is found the defense of “it was unintentional” will not stand and a penalty will be imposed Ref Standards FAQ Q40 and Ref AeA Q/A January 2007 Q58)

Trivalent based passivations do not need disclosing as any Hexavalent Chromium content formed as a by-product of the process has not been added intentionally. RoHS-International comment

Classification needs to be determined in the sequence EIP-A, EIP-B, EIP-C. ref SJ/T11363 section 4. This means that if a part is smaller than 4mm³ but can be easily disjointed into other parts such as a small mechanical switch, then it is to be classified as EIP-A. However a 0805 SMT capacitor would be EIP-C.

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Deca BDE is explicitly excluded. ref SJ/T11364-2006 section 3.2

Although Tetrabromobisphenol -A (TBBPA) and Hexabromocyclododecane (HBCD) are Brominated Flame Retardants, they are not PBDEs or PBBs. They are therefore not notifiable by China RoHS or indeed restricted by the EU RoHS.
RoHS-International comment

Definition of homogeneous material, component and test unit

Note: This section is for the benefit of companies interested in testing conformance at homogeneous level

The definition of homogeneous material is drawn directly from the EU Definition.
ref Disassembly methods 2.3, 2.4

The homogeneous materials are referred to as test units, as shown below.

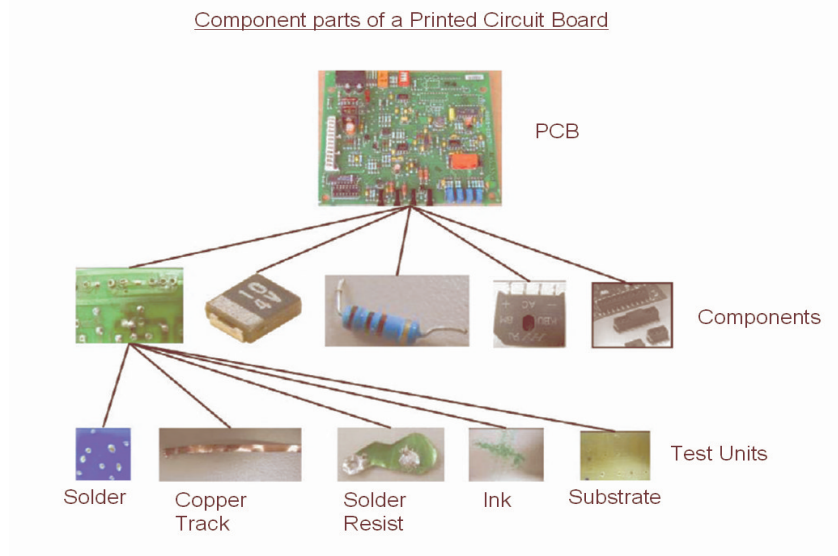
Test units will conform to EIP-A, EIP-B or EIP-C.

Surface treatment layers should be mechanically separated. If this is not possible a screening test such as XRF should be performed. If this fails then chemical separation or other method should be used. Ref Disassembly methods 3.7

For larger test areas, such as enclosures, testing should be done in the centre and at 2 diagonally opposing corners. ref Disassembly methods 4.2

Multilayer surface treatment layers, such as multiple paint layers, can be treated as homogeneous if they are either all organic or inorganic. Ref Disassembly methods 5.53

Component parts of a Printed Circuit Board





Marking requirements

Disclosure table

The 6 notifiable substances need to be disclosed in the format shown below. This must be included in the users manual for a product, or on the datasheet for a component. In some circumstances it can be posted on a website.

零件项目(名称) (Component Name)	有毒有害物质或元素(Hazardous Substances or Elements)					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Chromium VI Compound s (Cr6+)	多溴联苯 Poly- brominated Biphenyls (PBB)	多溴二苯醚 Poly- brominated Diphenyl Ethers (PBDE)
印制电路组件 (Printed Circuit Assemblies)	X	O	O	O	O	O
内部线路 (Internal wiring)	O	O	O	O	O	O
散热片(器) (Heatsinks)	X	O	O	O	O	O
底座 (Chassis)	X	O	O	O	O	O
塑胶外壳 (Plastic Enclosure)	O	O	O	O	O	O
螺母, 螺钉(丝), 螺帽(钉), 垫圈, 紧固件 (Nuts, bolts, screws, washers, Fasteners)	X	O	O	O	O	O
电源供应器 (Power Supply Unit)	X	O	O	O	O	O
显示(器) (Display)	O	X	O	O	O	O
电池(组) (Batteries)	O	O	X	O	O	O
文件说明书 (Paper Manuals)	O	O	O	O	O	O
O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006标准规定的限量要求以下。 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006. X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。 X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.						

The table above is an example only, and shows a breakdown of a complete product. Rows with all "O" in do not need to be declared (Ref FAQ Standards Q17),

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nor do paper manuals for the time being (Ref FAQ Regulation FAQ Q25), however RoHS-International recommends making the table representative of the complete product to reduce uncertainty as to where certain components are included. For example, internal wiring could be considered to be included under PCAs if not explicitly listed separately.

The part name can be at component level or at sub-assembly level but needs to be “consistent with industry practices”. Ref FAQ Standards Q17, Ref AeA Q/A January 2007 Q36 (the AeA translation is the clearer of the two)

A product that does not contain notifiable substances at concentrations above the limit values does not need to provide the disclosure table ie the table would contain all “O”. Ref December FAQ Standards Q17, Ref AeA Q/A January 2007 Q36

The grouping of parts into categories such as “other” or “miscellaneous” is not allowed. Ref Standards FAQ Q18

If any homogeneous material within that component or subassembly has concentrations of the notifiable substances above the maximum limit for EIP-A, EIP-B or EIP-C, then the substance needs to be disclosed.

The table, as shown above, needs to be in Chinese. Ref SJ/T11364 section 6.2.2

The bottom box needs to contain an explanation of the meaning of the “O” and “X”. Ref SJ/T11364 section 6.2.1

The bottom box can contain other relevant information Ref Standards FAQ Q16 (such as how to decipher the date of manufacture) RoHS-International comment

The minimum height of the characters in the table must be 1.8mm or greater. Ref SJ/T11364 section 6.2.2

The table is the minimum requirements, manufacturers can list additional substances or greater detail if they wish, but must keep to the prescribed format of the table. Ref FAQ Standards Q19

Many EU exemptions used, such as lead in glass of electronic components and lead in electronic ceramic parts will need to be disclosed. Lead in the form of PbO (exempt in the EU) in most SMT resistors will exceed the EIP-C limit values of China RoHS. See section “Issues with EU Exemptions” for more detail.

Product

There are 2 logos for marking of product.



Note: The number in logo 2 is only for demonstration. When in actual use, it shall be replaced with the corresponding environmental protection use period of the product.

Logo 1 is used if there are no notifiable substances in the product at concentrations above the limit values.

- Recommended colour for Logo 1 is green.
- Can be molded, painted, pasted or printed on the product, or in the users manual or data sheet. ref SJ/T11364-2006 5.4.1

In general this logo will be used for simple components, not for complex products as it can only be used where the appropriate limit values have not been exceeded. Most complex products will contain lead under one of the various EU exemptions.

Logo 2 is to be used if there are notifiable substances in the product at concentrations above the limit values.

. The number in the logo is the Environmentally Friendly Use Period.

- Recommended colour for Logo 2 is orange.
- Must be molded, painted, pasted or printed on the product if the product surface area is $>5000\text{mm}^2$ (approximately 4 inches by 2 inches) total surface area, unless the product is an irregular shape.
- If the product is smaller than 5000mm^2 (approximately 4 inches by 2 inches) total surface area, or an irregular shape (such as a cable) then the label must be in the users manual or data sheet in the case of a component. ref SJ/T11364-2006 5.5.2

Any other prominent colour may be used for either logo if the contrast is insufficient.

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The molding can be the same colour as the product.

- Logo must not be smaller than 5mm x5mm, and should be proportional to the size of the product. ref SJ/T11364-2006 5.4.2

The position of the logo must be prominent, such as the front of the product, or side or back of the product if function keys or similar are located there. If the appearance or function of the product do not make this possible then the logo can be put in any other position that is easily seen by the user. ref SJ/T11364-2006 5.5.3 - This is somewhat at odds with Standards FAQ Q11 that indicates that the logo can be put inside the battery compartment of a cell phone. It is suggested that companies err on the side of caution and abide by the direction given in SJ/T11364-2006 5.5.3. RoHS-International comment

If the instructions for use are on the packaging (as in there are no other instructions for use) then the disclosure table and EFUP should be on the packaging. Ref Standards FAQ Q12

Users manuals on CD ROM are treated as per printed material. It is acceptable to have the disclosure on a soft copy users manual if there is no hard copy supplied. Ref Standards FAQ Q13, Ref AeA Q/A January 2007 Q38

The specifications for the logos can be found in SJ/T11364-2006 Marking for Control of Pollution Caused by EIP. This is available free from <http://www.rohs-international.com/china-rohs-documents/>

Disclosure on a website

Two types of products can use websites for publishing the disclosure table. These are

1. Products with Maximum Surface Area smaller 5000mm² or irregular shaped components or product
2. Non-Household and non-Personal Product.

However manufacturer or importers must let users know where the websites are, and how to access the information. If a legal dispute occurs because users do not receive the relevant information through the website, the manufacturer or importers bear the legal liability.

RoHS-International Note:

The original Chinese version deliberately did not use the term Consumer Goods, but used the terms "Non-Household and Personal Product." We believe this is one category, not two categories, and in simple terms means non consumer

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goods. So, in plain English, if a component or product is not sold to a consumer, or has a smaller surface area than 5cmX10cm or equivalent, or is an irregular shape, then you can post your declaration table on a website. However you have to ensure that all your customers know where it is, if they don't know - it is your fault. Reference FAQ Standards Q14. This replaces the previous answer to question 14 from the Dec 2006 version of the standards FAQ and the detail in AeA Q/A January 2007 Q38.

Date of Manufacture

Manufacturers or importers should provide the date of manufacture of products for the start time of the "environment-friendly use period". Date of Manufacture of the product can either be marked on products, or the packing of product. The format of the marking can either be by "Year", "Year week", "Year month", "Year Month Day" etc or using the product's "serial number", "bar code", etc. This also includes continuing to use any standard in-house method that is already in use. If using methods such as the serial number or barcode then the manufacturer or importer must provide an explanation of how to decipher the date of manufacture, or provide contact details for the authorities or consumer to contact. Ref Standards FAQ Q22 *This replaces the previous answer to question 22 from the Dec 2006 version of the standards FAQ and the detail in AeA Q/A January 2007 Q31.*

Packaging

The intention of the packaging marking is to facilitate recycling. It is similar in intent to the EU Packaging Directive. Ref Standards FAQ Q30, , Ref AeA Q/A January 2007 Q27

Producers or importers shall follow GB 18455-2001 for labeling of packaging. ref SJ/T11364-2006 section 9.0 This is based similar to other international recycling standards.

A good translation of the standard is available from the AeA Website at http://www.aeanet.org/GovernmentAffairs/gabl_ChinaRoHSPage0905.asp

Marking is only required on the outside of the packaging for the external packaging but is encouraged for all packing materials. Ref Standards FAQ Q27, Ref AeA Q/A January 2007 Q27



Environmentally Friendly Use Period

In concept this is defined as the period during which any hazardous substances in the components of an EIP will not leak so as cause environmental pollution or serious damage to people or properties.

The period is to be stated to the nearest year, up and including 5 years, and thereafter rounded to the nearest 5 years. ref section 4.1 EPUP Draft Standard August 29

If the practical EFUP is known through experience then this should be used. (Practice Method) ref section 4.2.2 EFUP Draft Standard August 29

If Accelerated Life Testing has been carried out, this figure can be used as the basis of the EFUP. (Experimental Method) ref section 4.2.3 EFUP Draft Standard August 29

If the MTBF in hours (Mean Time Between Failure) is known, then this can be used (Technical Life Method).

EFUP = The normal MTBF / (average daily working life x365) for products that cannot be repaired.

EFUP = The normal MTBF / (average daily working life x365) x 125% for products that can be repaired.

ref section 4.3.2 EFUP Draft Standard August 29

If the product has a Safe Use Period defined then this can be used as the EFUP. 4.3.3 EFUP Draft Standard August 29. A Safe Use Period relates to equipment with a finite "safe" life span. An example could be a microwave oven where after a certain period the manufacturer no longer warrants the door seals as effective against radiation. Note the EFUP can be longer than the Safe Use Period. Ref EUCTR page Q24 P84

A fifth method is the comparison method. If there is an industry standard for a generic category for a product, then this can be used. 4.3.4 EFUP Draft Standard August 29.

If a product has a part containing notifiable substances, such as a lead acid battery (or potentially a mercury lamp in a projector) that has a much shorter life span than the actual product, then the EFUP of the product can be calculated excluding the periodically changed part. Ref regulation FAQ Q30. Note the contradictory FAQ in the May 2006 FAQ Q17 has been deleted in the Feb 2007 update.

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There is no explicit guidance yet from the authorities on whether the EFUP calculations relate only to the 6 notifiable substances. However none of the methods stated in the EFUP Draft Standard are based solely around the 6 notifiable substances. This infers that if a product has a part that has a very much shorter lifespan than the lifespan of the product, then that part, irrespective of whether it contains any of the 6 notifiable substances or not, will determine the EFUP of the whole product. It is assumed that this does not relate to consumables, although again this is not yet explicitly stated in any guidance from the authorities. See the free EFUP Discussion Paper from www.rohs-international.com for more details.

The start date for the EFUP is the date of manufacture. ref SJ/T11364-2006 7.0

The operating conditions (and assumptions) for determining the EFUP, such as: temperature, humidity, altitude, frequency of use, mode of use, standby time, storage time etc must be documented in the users guide. ref SJ/T11364-2006 7.0.

It is recommended by RoHS-International Ltd that the full details of the calculation or determination of the EFUP is documented in the users manual as the final EFUP standard is not yet published.

The draft standard has 3 generic examples:

1. Mobile Phone - 5 years
2. Digital Exchange/ Switching Platform - 50 years
3. Television - 7 years (sic) This should be rounded to 5 years.

ref Appendix A EPUP Draft Standard August 29

It is not yet known if the authorities will require products to be taken out of circulation after the EFUP expires. RoHS-International Comment

B2B and B2C

B2B Logo

There is no mention of B2B as a category in any of the standards. However.

Marking Standards SJ/T11364 -2006 section 4, General rules, AeA
Translation states

With respect to the electronic information products that are purchased for manufacturing. Suppliers need not provide the aforementioned marking, but shall supply to the purchaser all necessary information required for marking. Correspondingly, the purchasers (in this case) shall mark the electronic information products they manufacture and the scope for marking shall include that for the electronic information products purchased for manufacturing.

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Underscoring added by RoHS International and is not part of the original text.

Our Interpretation of this is the exception for marking applies to only parts that are used to make a finished product. A finished product being one that is for sale on the open market.

Underscoring added by RoHS International and is not part of the original text.

From EUCTP Q6

Business to Business refer to the cases which the upstream manufacturer, manufacture the products for the downstream manufacturers, which will not be for sale in the market

Underscoring added by RoHS International and is not part of the original text.

Our interpretation of this is this refers to situations such as contract manufacture and where custom parts are being made specifically for a single customer. There will be a cut off point somewhere for customized products where the customization is essentially software or manor hardware changes. Note the EU China Trade Project Report Questions and Answers is the only place where the term B2B and B2C occurs

From EUCTP Q6

Business to consumer refer to the cases which the manufacturer manufacture the products, which will be for sale in the market

Our Interpretation is this statement appears to indicate that B2C is anything that is sold on the open market. This is not the normal western interpretation of B2C.

The EUCTP report is not based on any legal document and hence has a higher inherent risk

We advise a conservative approach, marking any listed EIP that is for sale on the open market, irrespective of whether it is sold to a business or consumer

B2B Disclosure

See section "Disclosure on a website" under Marking requirements.

Testing Methods

These are based around practices already developed for EU RoHS.



Qualitative (Screen) testing - XRF is cited with limits of +/- 30% of the Concentration Limit Values Ref Standards FAQ #48 Dec 2006

Quantitative testing is substantially drawn from IEC111/54/CDV
GC/MS for Organics
ICP/AES or AAS or MS for metals
CVAAS as well as ICP/AES, MS for mercury

RoHS-International intends to produce further Guidance Document on the Catalogue, Disassembly Instructions and Testing Methods when the Catalogue is released.

Explicit Exemptions

Deca BDE ref SJ/T11364-2006 section 3.2

Manufacturing

Manufacturers are encouraged to use environmentally friendly processes. This is not a mandatory requirement. Ref Article 10 Management Methods for the Control of Pollution by EIP, ref Q12 Regulation FAQ

Hong Kong

Hong Kong is an independent administered region, so China law does not apply. Ref Regulation FAQ Q48

Put on the market

The definition of "Put on the Market" is the date the product is manufactured i.e rolls off the production line. Ref Regulation FAQ Q32

Liability

For a "product" the manufacturer is liable
Ref Regulation FAQ Q39

For a "component" the supplier is liable
Ref Regulation FAQ Q39

Leased Products

Leased products manufactured after 1 March 2007 need to comply. Ref Regulation FAQ Q44

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Inter-Company Transfers

Products sold from a foreign branch to a Chinese domestic branch need to comply if the Chinese branch has its own legal status. If a foreign parent company transfers product to a local branch under the same legal status then the “Administrative Measures” do not apply. Ref Regulation FAQ Q46

Using EU RoHS Compliance Certificates for China RoHS

Many companies have assumed that if a part or product is EU RoHS compliant then it will be China RoHS Compliant. This is not the case. The EU has issued many exemptions as for a number of applications it is not technically feasible to remove the substance in question. China RoHS does not currently require removal of any of the substances, only disclosure. Hence they have not approved any exemptions, as this would only exempt from disclosure requirements and defeat the purpose of a disclosure strategy. The exception to this is Deca BDE which is exempt from disclosure. This means that manufacturers relying on EU RoHS declarations need to know what exemptions have been claimed by suppliers in declaring their components as EU RoHS compliant. Many EU RoHS compliance certificates do not detail this.

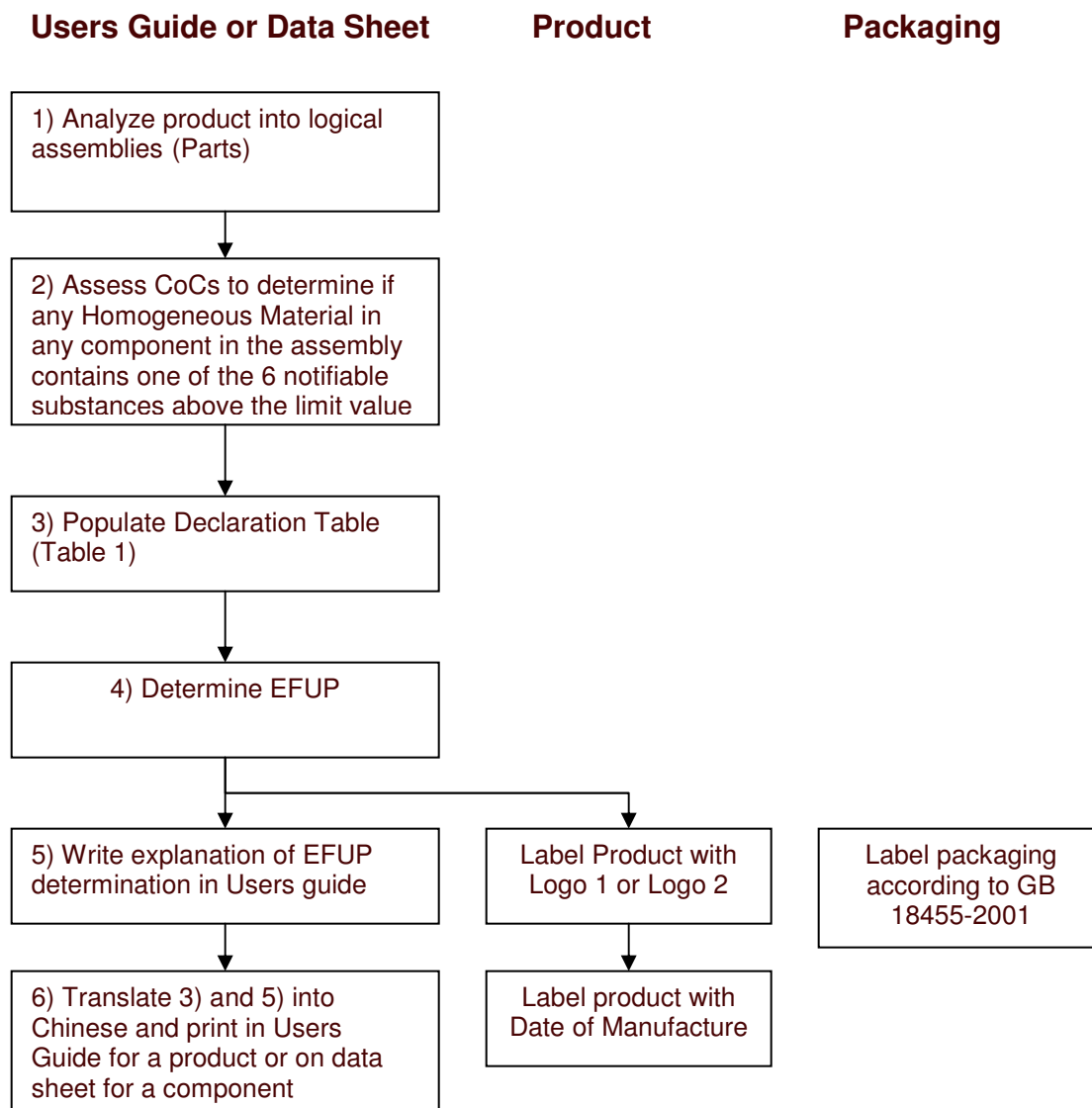
Specific areas to be wary of include

- 1) Lead in glass of electronic components (normally in the form of Lead Oxide, PbO)
- 2) Lead in electronic ceramic parts (normally in the form of Lead Oxide, PbO)
- 3) Mercury in LCD Backlights
- 4) Lead in Brass, aluminium and steel machined parts
- 5) Lead in High melting type solders internal to Integrated circuits of size $>4\text{mm}^3$

More details are in the Article “[Alert -Eu RoHS Compliant does not always mean China RoHS Compliant](#)” from available from www.rohs-international.com

Appendix 1 A flow chart for Compliance with China RoHS

Note that this is a suggested method only and may not include all requirements for compliance.



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Appendix 2 - Key Points

Key Technical Points

1. Nuts and bolts made of mild steel may contain > 1000ppm of lead to allow them to be machined. There is an exemption for up to 3500ppm of lead in the EU RoHS specifically for this purpose. This means that any nut or bolt or screw may need to have lead declared.
2. Brass parts especially inserts may have lead in them if they are machined parts. There is an exemption for 4% of lead in Copper and copper alloys (this include brass) to allow free machining.
3. Aluminium parts may have lead in them if they are machined parts. There is an exemption for 0.4% of lead in Aluminium to allow free machining.
4. All chromate based passivations will need to be declared.
5. All cadmium plating needs to be declared.
6. Any component that is EU RoHS compliant by exemption will need the exempted substance to be declared. This is an area of risk as many Certificates of Compliance do not state if an exemption is claimed. The IPC1752 Materials Declaration Standard, specifies declarations of all exemptions for this reason. A copy of all current EU Exemptions is included as Appendix 3.
7. Most power semiconductors and some SMT Integrated Circuits of >4mm³ will contain 85% or greater lead (Pb) content in the primary level interconnect and hence will need to be declared.
8. Most SMT resistors and some inductors will contain >1000ppm of lead or lead oxide at component level.
9. Any mercury containing backlights need to be declared.

Key General Points

1. Logo 1 will probably only be used for "components". Finished Products, by virtue of needing to declare the EU exemptions, will almost always need to use Logo 2.
2. We suggest that simple products, such as a switch assembly are disclosed at component level.
3. When analyzing a complex finished product for logical sub-assemblies (parts) for the disclosure table, RoHS-International suggest, as an example only, the following divisions.
 - a. PCA#1 + associated wiring and fixings
 - b. PCA#2+ associated wiring and fixings
 - c. PCA#3 + associated wiring and fixings
 - d. Chassis
 - e. Enclosure

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-
- f. External cables
 - g. Accessories (such as plug pack)
4. Consider the upstream uses for your “product” when assessing if you are in scope or out of scope. If your product is a sub-component of a larger product then consider if it is likely to become part of a product that is in scope. If this is the case then you may want to voluntarily comply, as your customer will (or should) be asking you for the disclosure information.



Appendix 3 - List of EU Exemptions as at 2nd April 2007

This list is included to highlight the specific applications where a part may be EU RoHS compliant but contain a substance that is notifiable under China RoHS. Note the numbers below do not relate to the EU Exemption numbering system.

1. Mercury in compact fluorescent lamps not exceeding 5 mg per lamp.
2. Mercury in straight fluorescent lamps for general purposes not exceeding:
 - a. halophosphate 10 mg
 - b. triphosphate with normal lifetime 5 mg
 - c. triphosphate with long lifetime 8 mg.
3. Mercury in straight fluorescent lamps for special purposes.
4. Mercury in other lamps not specifically mentioned in this Annex.
5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
6. Lead as an alloying element in steel containing up to 0.35 % lead by weight, aluminium containing up to 0.4 % lead by weight and as a copper alloy containing up to 4 % lead by weight.
7. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).
8. Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications.
9. Lead in electronic ceramic parts (e.g. piezoelectronic devices).
10. Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC (*) amending Directive 76/769/EEC (**) relating to restrictions on the marketing and use of certain dangerous substances and preparations.
11. Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators.
12. Deca BDE in polymeric applications.
13. Lead in lead-bronze bearing shells and bushes.
14. Lead used in compliant pin connector systems.
15. Lead as a coating material for the thermal conduction module c-ring.
16. Lead and cadmium in optical and filter glass.
17. 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.
18. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
19. Lead in linear incandescent lamps with silicate coated tubes.

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20. Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications.
21. 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 (BaSi205:Pb) as well as when used as specialty lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ($((\text{Sr,Ba})_2\text{MgSi2o7:Pb})$).
22. 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).
23. Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).
24. Lead and cadmium in printing inks for the application of enamels on borosilicate glass.
25. Lead as an Impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems.
26. Lead in finishes of fine pitch components, other than connectors with a pitch of 0.65 mm or less with NiFe lead frames and lead in finishes of fine pitch components, other than connectors with a pitch of 0.65 mm or less with copper lead-frames.
27. Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.
28. Hexavalent chromium in corrosive preventive coatings of unpainted metal sheetings and fasteners used for corrosion protection and Electromagnetic Interference Shielding in equipment falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Exemption granted until 1 July 2007.
29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC.
30. Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes.
31. Lead oxide in the glass envelope of Black Light Blue (BLB) lamps.
32. 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.