

Frequently Asked Questions

Rev A

China RoHS

1. Why does Ecliptek offer China RoHS components and assemblies?

Ecliptek has implemented a China Restriction of Hazardous Substances (RoHS) Compliance program in response to international concerns about the environmental impact of Lead (Pb) and other hazardous substances used in the manufacturing of electronic components and assemblies.

2. What legislation has been established by China regulatory groups?

The Ministry of Information Industry (MII) of the People's Republic of China has developed and issued legislation called the "Measures for the Administration of the Control of Pollution of Electronic Information Products" released on February 28, 2006. This legislation, commonly referred to as "China RoHS", is intended to enhance environmental protection by requiring the reduction or elimination of toxic and hazardous substances in electronic products.

3. What is the scope of the products regulated by China RoHS?

China RoHS applies to all "Electronic Information Products" (EIP) containing toxic and hazardous substances that are available for sale in the Chinese marketplace. China RoHS regulation applies to products imported into China for sale in China and products manufactured in China and sold in China. However, it excludes products imported into China for re-export or manufacturing of products for export.

4. What is the scope of the substances regulated by China RoHS?

Similar to the European RoHS guidelines, it regulates the use of certain hazardous substances such as lead, cadmium, hexavalent chromium, mercury, and PBB/PBDE polybrominated flame inhibitors.

5. What are the China RoHS maximum concentration values (MCV) for restricted substances?

As outlined in the China RoHS legislation, the restricted substance maximum concentration values (MCV) tolerated by weight in homogeneous materials are listed in the table below.

Material	Maximum Concentration Value (MCV)
Lead (Pb)	0.1% by weight
Cadmium (Cd)	0.01% by weight
Mercury (Hg)	0.1% by weight
Hexavalent Chromium (Hex-Cr)	0.1% by weight
Polybrominated Biphenyls (PBB)	0.1% by weight
Polybrominated Diphenyl Ethers (PBDE)	0.1% by weight

6. What is the first phase of China RoHS?

The China RoHS legislation will be implemented in phases. The first stage applies to all EIP "Put on the Market" on, or after March 1st, 2007. This stage permits the use of restricted substances and requires the use of pollution control symbols indicating the presence of restricted substances and the "Environmental Protection Use Period" (EPUP). This phase also requires the disclosure of the restricted substances contained in EIP above the MCV listed in the table above.

7. What is the Environmental Protection Use Period (EPUP)?

The EPUP is the "period in which, when toxic and hazardous substances or elements contained in the electronic information products are in normal use, such substances or elements will not leak out or undergo abrupt change, and the use of the electronic information product by an electronic information product user will not result in serious pollution to the environment or result in serious personal injury or property damage with regard to the user."

Ecliptek understands that the EPUP shall be determined by the product producer or importer (entity placing the product into the marketplace) of the EIP. As such, Ecliptek does not define the EPUP for any of its components or assemblies.

8. What is the second phase of China RoHS?

On October 9, 2009 the Chinese government published the first draft of the "Key Administrative Catalogue for the Control of Pollution of Electronic Information Products" (Catalogue). In this second phase, Electronic Information Products (EIP) listed in the Catalogue are subject to China RoHS substance restriction requirements. The draft was published for consultation which ended a month later. Adoption of this legislation is still pending release and there has been no announcement of when it will enter into force.

9. What is China RoHS2?

On July 16, 2010 the Chinese Ministry of Industry and Information Technology (MIIT) released an exposure draft of a document titled “Measure for Administration of Pollution Control of Electronic and Electrical Products”. This document, referenced as China RoHS 2, is a revision of the earlier “Measures for the Administration of the Control of Pollution of Electronic Information Products” published by the MII. A key revision is the amending of the coverage of products by modifying the definition from EIP to Electrical and Electronic Equipment (EEE). The draft was published for consultation which ended a month later.

10. What is China RoHS2 today?

On June 4, 2012 the MIIT released a revised version of the China RoHS 2 draft first published in 2010. The new China RoHS 2 draft, called the “exposure draft version”, aims to do the following:

- Adds no new substances or changes in the maximum concentration values of these substances.
- Similar to the EU RoHS, product scope moves from EIP to Electrical and Electronic Equipment (EEE).
- Clarifies the definition of EEE.
- Clarifies the definition of hazardous substances.
- Adds requirements for product impact on the environment and human health.
- MIIT and the Certification and Accreditation Administration of China would receive more authority to implement China RoHS issues.
- Provides the development of a product compliance assessment system by MIIT and the Certification and Accreditation Administration of China.
- The “Key Administrative Catalogue for the Control of Pollution of Electronic Information Products” is renamed as the “Target Administrative Catalogue for the Pollution Control of Electrical and Electronic Products”.

The draft was published for consultation which ended a month later. Adoption of this legislation is still pending release and there has been no announcement of when it will enter into force.

11. What is Ecliptek’s definition of a Component?

Ecliptek's definition of a component applies to quartz crystal devices.

12. What is Ecliptek’s definition of an Assembly?

Ecliptek's definition of an assembly applies to oscillator devices (MEMS Oscillator, XO, VCXO, TCXO, or OCXO).

13. When is an Ecliptek component or assembly classified as China RoHS compliant?

An Ecliptek component or assembly is classified as China RoHS compliant when it contains none of the restricted substances over the maximum concentration values (MCV) tolerated by weight in homogeneous materials as listed in the table above.

14. How can I obtain a China RoHS declaration from Ecliptek?

To assist customers in meeting their China RoHS obligations, part number specific China RoHS Declarations are instantly available for most Ecliptek part numbers, and may be accessed on our Item Detail pages. Use one of our [Part Search](#) methods to find your part number and go to its Item Detail page, or find the [crystal](#) or [oscillator](#) product series you need and then construct your part number from its Series home page.

This declaration provides a hazardous substance content disclosure table. The table provides a binary yes or no disclosure that indicates if homogeneous materials within the component or assembly contain specific substances that exceed the MCV listed in the table above.

15. Does Ecliptek have a special component or assembly logo or marking requirements for China RoHS Compliant components or assemblies?

There are no legislated China RoHS requirements for individual component or assembly marking. As Ecliptek is not the producer or importer of EEE, there are no special logo or marking requirements for our products. The marking content for all Ecliptek components or assemblies is shown on the applicable specification sheet found on our website.

16. Does Ecliptek have a special labeling method for shipment packaging of China RoHS Compliant components or assemblies?

Ecliptek does not offer EEE to the market that is intended to be used directly by the end customer. The components and assemblies produced by Ecliptek are not marked with, nor does the packaging need to carry, the pollution control logos.

17. Do I need to make any process or material changes to my PCB assembly process to use Ecliptek China RoHS Compliant components or assemblies?

China RoHS components and assemblies manufactured by Ecliptek are qualified for use in PCB assembly processes using either Tin-Lead (SnPb) or Tin-Silver-Copper (SnAgCu) solders for component attachment. Ecliptek qualification testing indicates that our China RoHS Compliant components and assemblies can be used interchangeably in either PCB assembly process.

18. What are the Solder Reflow Profiles specified by Ecliptek?

The recommended solder reflow profile(s) for all Ecliptek components or assemblies can be found on the applicable datasheet on the Ecliptek website.

19. Are products classified as China RoHS Compliant forward and backwards compatible to Lead (Pb) and Pb-free PCB reflow processes?

Solderability testing has been performed by Ecliptek to ensure both forward and backward process compatibility of China RoHS Compliant products with various PCB assembly environments. To certify forward compatibility, solderability testing was performed using SnAgCu solder at higher temperatures (as high as 260C). In order to certify backwards compatibility, standard Tin-Lead (SnPb) solder was used at lower temperatures (as low as 215C). The recommended solder reflow profile(s) for all Ecliptek components or assemblies can be found on the applicable datasheet on the Ecliptek website.

20. What qualification and reliability testing has been completed to evaluate and qualify China RoHS Compliant components and assemblies?

Links to qualification and reliability reports for Ecliptek components and assemblies can be found on the series home page. Navigate to the series page and click on the Qualification Report link in the Resources column.

21. Are there any changes required in component or assembly storage conditions of China RoHS Compliant products?

There are no changes in the storage condition specifications. Upon receipt of Ecliptek products, it is always good manufacturing practice to store components and assemblies in their original unit packaging and in a controlled environment so as not to expose them to extremes of humidity and temperature for extended periods of time and to protect them from damage.

22. What is the Moisture Sensitivity Level (MSL) for Ecliptek products classified as China RoHS Compliant?

The moisture sensitivity level for all components or assemblies is shown in the 'Recommended Solder Reflow Methods' section on the applicable Ecliptek specification sheet found on our website.

23. What is the Pb-free solder composition qualified by Ecliptek?

Ecliptek has qualified the following Pb-free composition: Sn95.5Ag3.9Cu0.6 This composition is recommended by the North American Electronics Manufacturing Initiative (NEMI). Additionally, Ecliptek has qualified another Pb-free composition: Sn96.5Ag3.0Cu0.5 This composition is recommended by IPC's Solder Product Value Council (SPVC). If the customer has special requirements for the solder composition type, please contact the [Ecliptek Global Customer Support](#) team.

24. Why were the Sn95.5Ag3.9Cu0.6 and Sn96.5Ag3.0Cu0.5 solder composition types selected by Ecliptek?

Industry testing of Sn95.5Ag3.9Cu0.6 and Sn96.5Ag3.0Cu0.5 indicates that it is compatible with both Tin-Lead (SnPb) and Pb-free component and assembly lead terminations and processes.

25. What is the solder composition recommended by Ecliptek?

Ecliptek does not make solder composition recommendations. It is the customer's responsibility to qualify a solder to be used in their application. Please contact the [Ecliptek Global Customer Support](#) team to discuss possible solder composition solutions with the Ecliptek technical staff.

26. If the China RoHS directive only mentions six (6) substances, why are some customers interested in concentration levels of other substances?

Some customers may have their own internal substance control requirements that exceed the China RoHS directive. If a customer has additional substance requirements beyond the six substances, please contact the [Ecliptek Global Customer Support](#) team.

27. Who at Ecliptek is coordinating the company's China RoHS Compliance effort?

An Ecliptek China RoHS Compliance team has been established and meets regularly to coordinate China RoHS company policy. This team coordinates all China RoHS tasks with respect to our manufacturing locations and qualified subcontractors. All customers can obtain the status of the team's on-going efforts by reviewing these FAQ's and associated links. Please contact our [Ecliptek Global Customer Support](#) team if you have any questions about our program.

28. Who do I contact if I have additional technical questions about Ecliptek China RoHS issues?

Please contact our [Ecliptek Global Customer Support](#) team for China RoHS compliance support. We encourage you to visit our website regularly to obtain the most up-to-date China RoHS information.