



Cypress Semiconductor Pb-Free FAQ

Q: Is Cypress standard product Pb-Free?

A: As of Q409, over 95% of Cypress products are Pb-Free. Cypress started our transition to Pb-Free product in 2003. The remaining product are based on customer demand.

Q: What are Cypress Pb-Free package finishes?

A: For leadframe based packages, nickel-palladium-gold (NiPdAu) is the primary option along with matte tin (Sn). BGA packages use tin-silver-copper (SnAgCu) solder balls. Many customers also prefer NiPdAu over matte tin and iNEMI prescribed NiPdAu as the most preferred termination finish.

Q: Will Cypress continue to support non Pb-Free product?

A: Yes, Cypress will continue to support non Pb-Free products based on customer demand. Non Pb-Free products are selectively pruned where business conditions do not justify and this action is advised via the PCN process

Q: What is Cypress definition of Pb-Free?

A: Pb-free product meets the RoHS threshold limit of 1000 PPM for Lead (Pb) and high temperature reflow capability @ 260°C as defined in reference JEDEC J-STD 020.

Q: Can Customers use Pb-Free product in current Pb based production?

A: Yes and No. NiPdAu leadframe packages are backwards compatible in most assembly processes, but Cypress recommends the assembler assess their process and results. BGA packages and Matte Sn leadframe packages are not backwards compatible since higher reflow temperatures are required.

Q: Why do Pb-Free packages need to withstand higher reflow temperatures?

A: Pb-Free solder pastes require higher temperatures than Pb based solder pastes for them to become liquid and active enough to wet to the base metal .

Q: How can customers order Pb-Free products?

A: Yes, Pb-Free products have an "X" in the ordering part number to ensure segregation in customer ordering and inventory systems.

Examples:

<u>Non Pb-Free Part Number</u>	<u>Standard Pb-Free Part Number</u>
CY7C199C-15VC	CY7C199C-15VXC
CY25023SC-1T	CY25023SXC-1T

Q: Is Pb-Free product marked differently?

A: Yes, the marketing part number, with the "X", is marked, except when there are space limitations on very small packages like 8 lead SOIC packages.

Q: Where can I get package composition data?

A: Cypress provides on the [cypress.com](http://www.cypress.com) web site package material composition reports in both the Cypress PMDD (Product Material Declaration Document) format developed prior to IPC-1752-2 and in the IPC-1752-2 format. Starting 15 March 2010 package composition reports will be linked on the product page on www.cypress.com.

Q: If my company requires a specific format, how do I submit my request?

A: For requests other than PMDD or IPC-1752-2, please submit via the Cypress TightLink request system or contact your local Sales Representative.

Q: For matte tin finishes what does Cypress do to reduce the chance of tin whiskers?

A: Cypress has qualified matte tin production flow with a one hour 150°C annealing step and the tin plating thickness is also controlled.

Q: Since Cypress provides two different Pb-Free materials, NiPdAu and matte tin, could the customer get both?

A: Yes, Cypress uses a flexible manufacturing initiative to ensure continuity of supply in times of demand surges. Cypress identifies the material composition on the MSL labels on packing materials for every shipment to customers.

Q: Is Cypress products compliant to EU RoHS?

A: Yes, Cypress Pb-Free products are compliant to EU RoHS. Specific composition information is in the PMDD or IPC-1752 reports available on www.cypress.com.

Q: Are Cypress products compliant to China RoHS?

A: Yes, Cypress Pb-Free products are compliant to China RoHS. In addition, the packing materials (moisture resistance bag, reel, cartons, etc...) are labeled with the required China RoHS logos and the material content per the China's Ministry of Information Industry (MII) format in Chinese is provided for each shipment to China. Specific composition information is in the PMDD or IPC-1752 reports available on www.cypress.com.

Q: Are Cypress RoHS products compliant to REACH?

A: The majority of Cypress Pb-Free semiconductor product and solutions are compliant with the REACH Regulation No. 1907/2006/EC of the European Parliament and of the Council of 13 January 2010, list of 29 REACH Version 2

Substances of Very High Concern (SVHC) materials. If Cypress products contain any SVHC substance exceeding the 0.1% w/w, Cypress will disclose this information by part number based on customer request.

Cypress is an article producer (semiconductor and semiconductor solutions). Cypress does not manufacture in Europe and does not import chemicals into Europe. Cypress is not a substance or preparation producer per REACH definitions. Cypress is not required to pre-register with REACH.

Q: Are Cypress products compliant to Green?

A: As of Q409, more than 85% of Cypress packages are Halogen Free / Green. Cypress has been moving to Green material since 2007, including packaging material. Cypress is a Sony Green supplier. Cypress will disclose this information by part number based on customer request.

Q: Does the price change for non-Pb-Free product?

A: Market conditions determine price, please contact your sales representative for current quotes.

Q: What options are available tin lead solder finish devices that Cypress has made end-of-life?

A: For authentic Cypress product, we strongly recommend that you only contact Cypress approved distributors, also Rochester and America II who handle Cypress excess material. Cypress does not warranty nor provide support for material procured from non-Cypress authorized sources.

Q: What is Cypress contact for Pb-Free/Green/RoHS program?

A: Richard Oshiro, Director Quality Systems

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